AMERICAN

25c

$3.00 YEARLY IN U. S.

Cinematographer

THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY

JUNE
1949

PRINT MADE ON STANDARD CHLORO-BROMIDE PAPER

PRINT MADE ON "VARIGAM" VARIABLE CONTRAST PHOTOGRAPHIC PAPER. Filter #10 was used for printing lower portion. Filter #2 for printing upper portion. Two different contrasts obtained in a single sheet of paper.

You'll Get What You Want with . . .

Defender VARIGAM*

TRADE MARK

Both prints were made from the same negative!

Think of the unlimited possibilities within your reach! In a single sheet of paper, with easy-to-use filters, you can obtain any one of ten contrasts. The illustration shows combination of contrasts. Without filters you use "Defender" "Varigam" as a normal contrast paper.

Eliminate storage of extra grades of contrast . . . a big saving in the long run. Have the right paper on hand when you need it.

Try "Varigam" in any of the five popular surfaces. You'll be amazed with its economy . . . versatility . . . and quality.

DU PONT

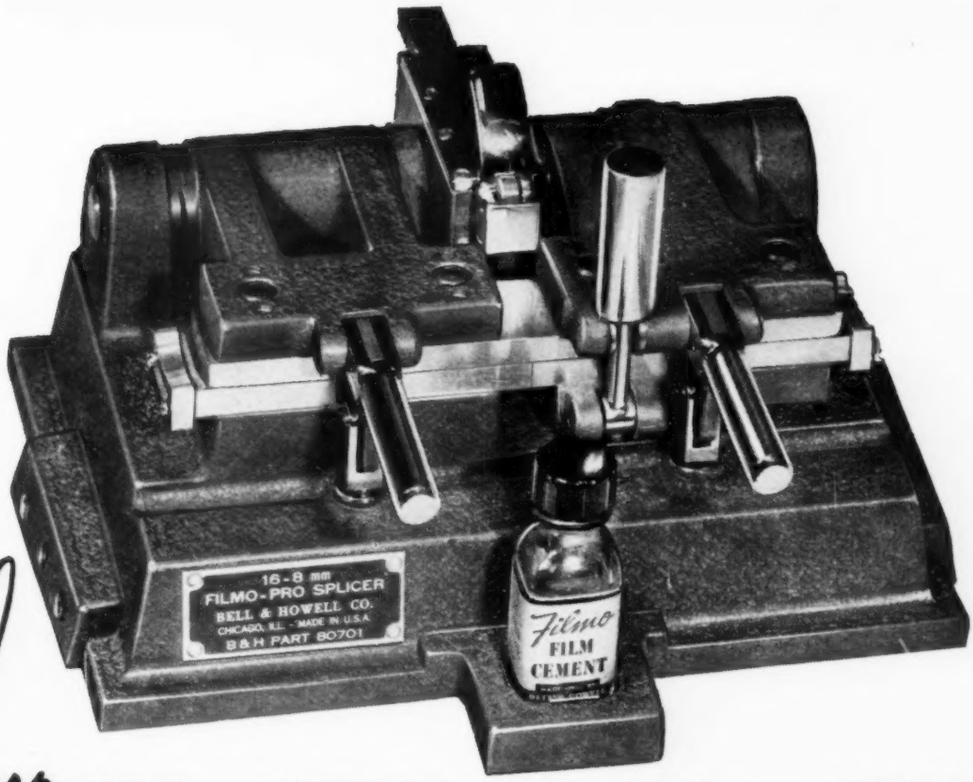
BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

E. I. DU PONT DE NEMOURS & CO., (INC.)
Photo Products Department, Wilmington 98, Delaware

In Canada, Canadian Industries Ltd.,
912 New Birks Building, Montreal, P. Q.

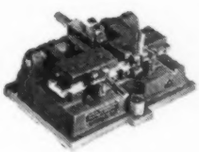
TUNE IN "CAVALCADE OF AMERICA"
MONDAY EVENINGS – NBC – COAST TO COAST

* TRADE MARK REG. U. S. PAT. OFF.



Filmo-PRO...NEW 16mm and 8mm SPLICER

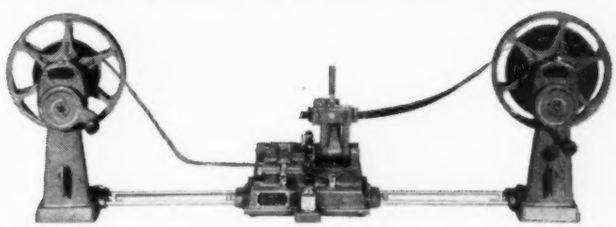
B&H PROFESSIONAL PORTABLE . . . 35mm-16mm



Straight-across frame line cut, base heater, Carboloy-tipped scraper blades...all the outstanding features of the FILMO-PRO Splicer (above) have been adapted to 35mm-16mm editing in this new . . . *and portable* professional model. Occupies 10½" x 8½" x 4¾" of bench space. Weighs only 12½ pounds. Write for full details today!

B&H AUTOMATIC FILM SPLICING MACHINES ARE AVAILABLE IN 7 MODELS TO ACCOMMODATE ANY REQUIREMENT

Anticipating every special need in professional film editing, B&H provides seven versatile 35mm splicing machines, all fully automatic. Welds are film-strong and inconspicuous... accomplished quickly with minimum effort. B&H Splicing Machines have been standard equipment in film exchanges, laboratories, and studios since 1915. Write for new catalog, outlining your needs.



For amateur or professional, here's a new-type splicer . . . for 16mm or 8mm . . . sound or silent . . . color or black-and-white film. Gives you a film-saving straight cut at the frame line. And lowest visibility. Splice is only .070" wide!

Beautifully compact, the new FILMO-PRO is a versatile, one-operation, semi-automatic machine occupying only 7½" x 7½" x 4¾" of bench space, and weighing but five pounds. Will take B&H Heavy-duty 16mm Rewinds, as shown above.

Innovations on the FILMO-PRO include a Carboloy-tipped scraper . . . good indefinitely, without resharpening. Blade-holder and support arm are integral parts of the machine. No need to pick up scraper block manually. After cement is applied, FILMO-PRO shears both ends of the film and applies mechanical pressure automatically. Heater in the base shortens setting time. After scraping, simply release scraper support. Both hands remain free for winding film and clamping scraper blades.

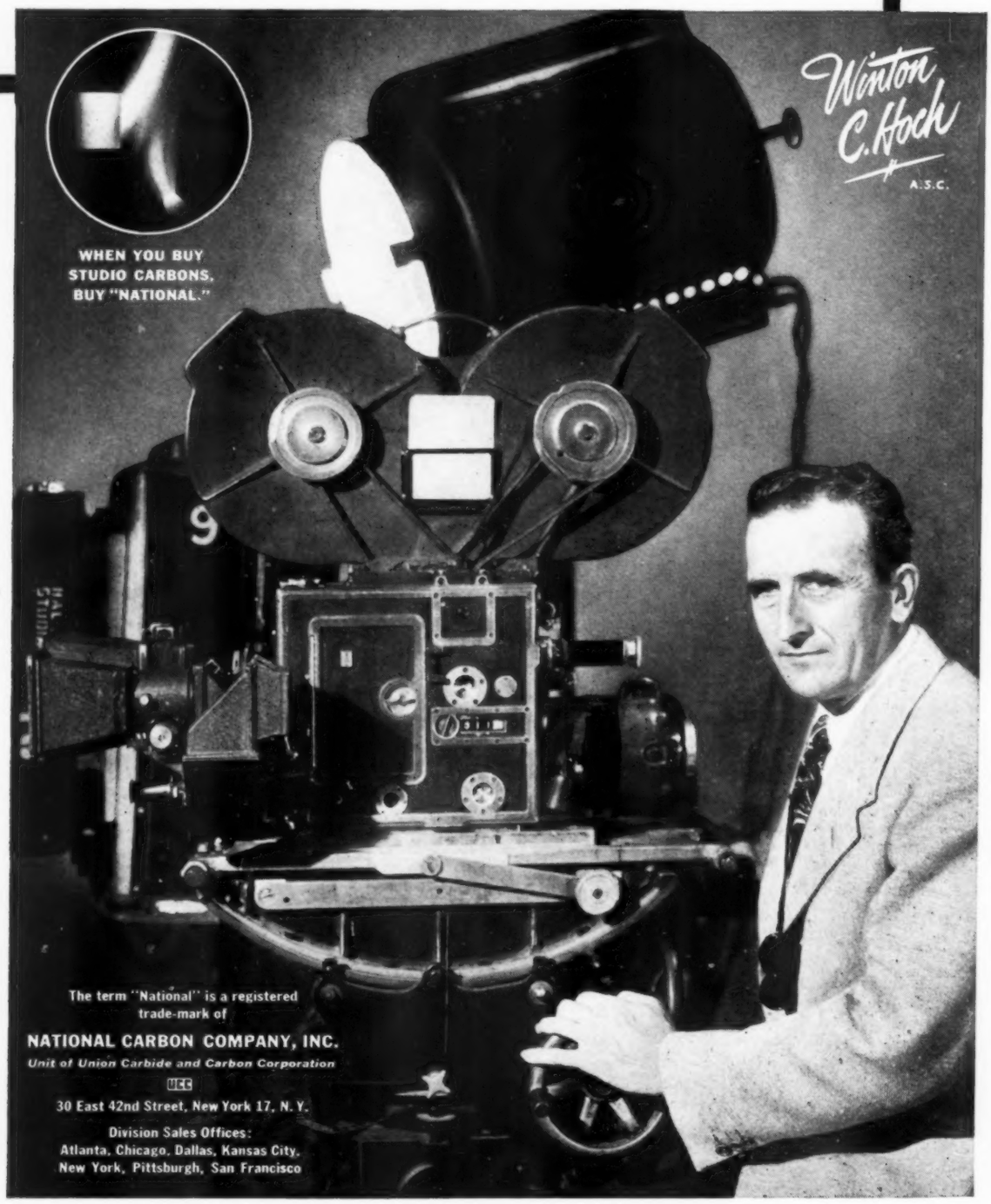
New FILMO-PRO Splicers are available for shipment now. Write Bell & Howell Company, 7148 McCormick Road, Chicago 45. Branches in New York, Hollywood, and Washington, D. C.

Precision-Made by

Bell & Howell

Since 1907 the Largest Manufacturer of Professional Motion Picture Equipment for Hollywood and the World

"The brilliant white light, controllability, carrying power, and the unprecedented light output from single lighting units, make the use of carbon arcs a very important factor in successful lighting for Technicolor photography."


Winton C. Hoch
A.S.C.
WHEN YOU BUY STUDIO CARBONS, BUY "NATIONAL."
The term "National" is a registered trade-mark of
NATIONAL CARBON COMPANY, INC.
Unit of Union Carbide and Carbon Corporation
UCC
30 East 42nd Street, New York 17, N. Y.
Division Sales Offices:
Atlanta, Chicago, Dallas, Kansas City,
New York, Pittsburgh, San Francisco

AMERICAN
Cinematographer
THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY

ARTHUR E. GAVIN, *Editor*
Technical Editor, EMERY HUSE GLENN R. KERSHNER *Art Editor*
Circulation, MARGUERITE DUERR
EDITORIAL ADVISORY BOARD: Fred W. Jackman, A.S.C., John Arnold, A.S.C. Arthur Edeson, A.S.C., Lee Garmes, A.S.C., Charles Rosher, A.S.C., Leon Shamroy, A.S.C., Fred Gage, A.S.C., Dr. J. S. Watson, A.S.C., Dr. L. A. Jones, A.S.C., Dr. C. E. K. Mees, A.S.C., Dr. V. B. Sease, A. S. C., Col. Nathan Levinson.
Editorial and Business Office: 1782 N. Orange Dr., Hollywood 28, Calif.
Telephone: GRanite 2135

VOL. 30 JUNE • 1949 NO. 6

CONTENTS

ARTICLES

CHAMPION—*By Ralph Lawton* 196
IT'S THE PRINT THAT COUNTS—*By Clemmie Galloway* . . . 198
THE FOUNTAINHEAD—*By Herb A. Lightman* 200
NEWSREELER'S DILEMMA—*By John Dored, A.S.C.* 201

TELEVISION PHOTOGRAPHY

HOW ZOOMAR AIDS TV PHOTOGRAPHY—*By Victor Ford* . . . 202
PUSHBUTTON CINEMATOGRAPHY—*By Frederick Foster* . . . 205

16MM. AND 8MM. CINEMATOGRAPHY

ON THE WAY—MAGNETIC SOUND FOR 8MM. 206
CUTTING THE COMMERCIAL FILM—*By Charles Loring* . . . 208
CAMERA TIMER FOR TIME-LAPSE
CINEMATOGRAPHY—*By John Forbes* 210

FEATURES

HOLLYWOOD BULLETIN BOARD 194
ROSTER OF AMERICAN SOCIETY OF CINEMATOGRAPHERS . . . 121
CINE KINKS FOR MOVIE AMATEURS 214
25 YEARS AGO WITH A.S.C. AND MEMBERS 222
WHAT'S NEW IN EQUIPMENT, ACCESSORIES, SERVICE 222
CURRENT ASSIGNMENT OF A.S.C. MEMBERS 224

ON THE COVER

VINCENT FARRAR, A.S.C., (second from left) in a between scenes conference with Penny Singleton, director Edward Bernds and Arthur Lake, on the "Blondie's Hero" set, points out how a suggested switch in the action will give him a better camera angle. "Blondie" is calling instructions to her standin going through suggested routine on the set.—Photo by Warner Crosby.

AMERICAN CINEMATOGRAPHER, established 1920, is published monthly by the A. S. C. Agency, Inc., 1782 N. Orange Dr., Hollywood 28, Calif. Entered as second class matter Nov. 18, 1937, at the postoffice at Los Angeles, Calif., under act of March 3, 1879. SUBSCRIPTIONS: United States and Pan-American Union, $3.00 per year; Canada, $3.00 per year; Foreign, $4.00. Single copies, 25 cents; back numbers, 30 cents; foreign single copies, 35 cents; back numbers, 40 cents. Advertising rates on application. Copyright 1949 by A. S. C. Agency, Inc. AUSTRALIAN REPRESENTATIVE: McGill's, 179 Elizabeth St., Melbourne.

★

AMERICAN SOCIETY OF CINEMATOGRAPHERS

FOUNDED January 8, 1919, The American Society of Cinematographers is composed of the leading directors of photography in the Hollywood motion picture studios. Its membership also includes non-resident cinematographers and cinematographers in foreign lands. Membership is by invitation only.

The Society meets regularly once a month at its clubhouse at 1782 North Orange Drive, in the heart of Hollywood. On November 1, 1920, the Society established its monthly publication "American Cinematographer" which it continues to sponsor and which is now circulated in 61 countries throughout the world.

Dominant aims of the Society are to bring into close confederation and cooperation all leaders in the cinematographic art and science and to strive for pre-eminence in artistic perfection and scientific knowledge of the art.

OFFICERS AND BOARD OF GOVERNORS

CHARLES G. CLARKE, President
FRED W. JACKMAN, Exec. V-Pres. and Treas.
ARTHUR EDESON, First Vice-President
GEORGE J. FOLSEY, JR., Second-Vice-Pres.
WILLIAM V. SKALL, Third Vice-President
RAY RENNAHAN, Secretary
JOHN W. BOYLE, Sergeant-at-Arms
Victor Milner
Sol Polito
Alfred Gilks
Charles Rosher
Lee Garmes
John Seitz
Leon Shamroy
Joseph Walker

ALTERNATE BOARD MEMBERS

John Arnold
Sol Halprin
Arthur Miller
Hal Mohr
Joseph Ruttenberg

★

Hollywood
Bulletin Board

←
"A SWELL PICTURE!"—Fred W. Jackman, A. S. C., (left) and Arthur Miller, A. S. C., congratulate Robert Stillman, Associate Producer, Screen Plays Corpn., on his recent hit production, "Champion," which Stillman screened for A. S. C. members at opening of Society's new projection room last month.

→
GENERAL APPROVAL—Gen. Jonathan Wainwright meets with actor Jimmy Stewart (center) and Ralph Staub, A. S. C., who together with writer Owen Crump produced a ten-minute short, "How Much Do You Owe?" gratis for Disabled American Veterans, of which Wainwright is national commander. Purpose of short is to build sales for Vets' "Indent-O-Tags," key-ring auto license plate miniatures sold by mail.

CHARLES G. CLARKE, president of the A.S.C., and John Boyle, A.S.C., have been re-elected to Board of Governors of the Academy of Motion Picture Arts and Sciences. Clarke currently is in Berlin to photograph a picture based on the airlift for Fox.

•

JACK CARDIFF, A.S.C., who won an Academy Award two years ago for photography of "Black Narcissus," is in Morocco shooting "The Black Rose" which Henry Hathaway is directing for Twentieth Century-Fox.

•

GEORGE FOLSEY, A.S.C., recently returned with George Cukor from New York where he photographed background shots for "Adam's Rib," M-G-M production.

•

FRANK PLANER, A.S.C., sailed for Europe, May 1st, to visit relatives in Vienna and to enjoy a long-overdue vacation. Mrs. Planer accompanied him.

•

HAL ROSSON, A.S.C., planed to New York City recently to photograph background footage for M-G-M's "On The Town," which is being directed by Kelly, who also is the star.

PROVING AN IDEA — Recent guest of Charles Rosher, A. S. C., (right) and screen director George Sidney (left) at MGM was Harris Tuttle, Eastman Kodak exec and head of Motion Picture Division of P. S. A. Trio collaborated on demonstration tending to show economic advantages of using 16mm. Kodachrome for screen tests.

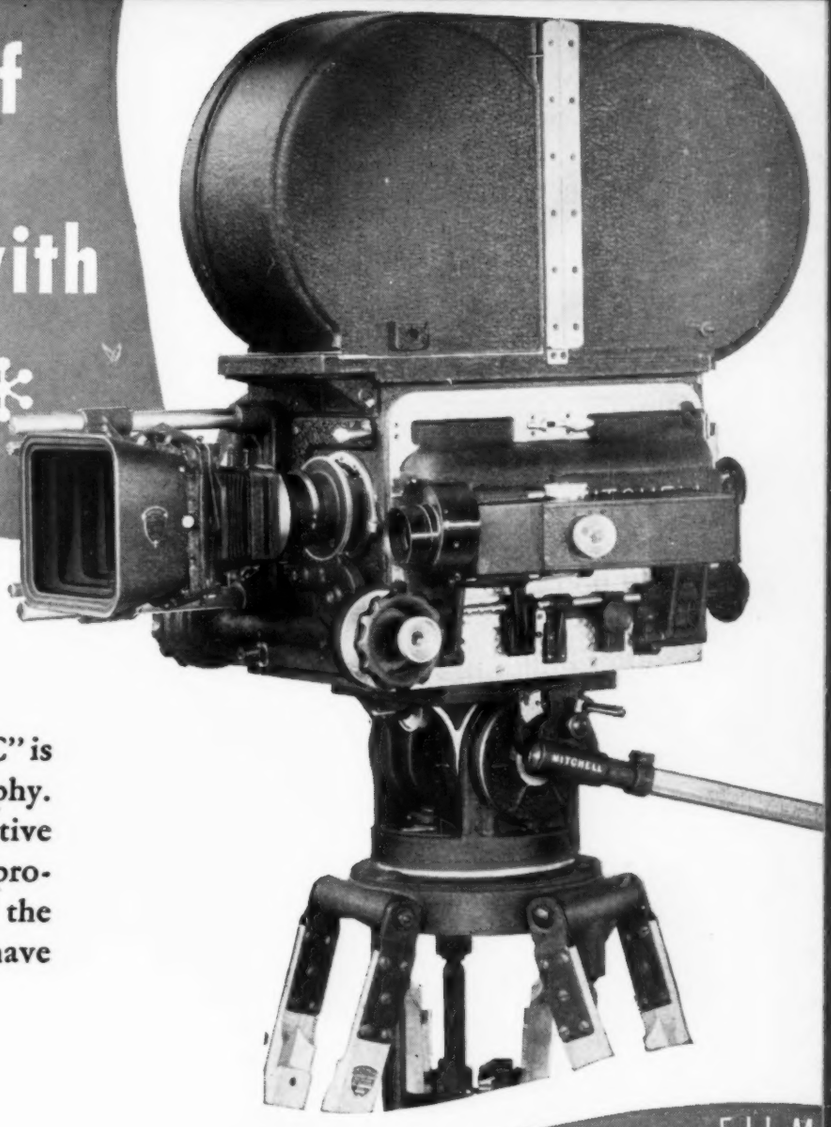
TECHNICOLOR and Eastman Kodak Co., have developed a new type negative for the three-strip Technicolor cameras. Stock is claimed to be 100 percent faster than present film, will allow considerable saving in illumination costs. Test rolls have been shot by most of the major studios for comparison.

•

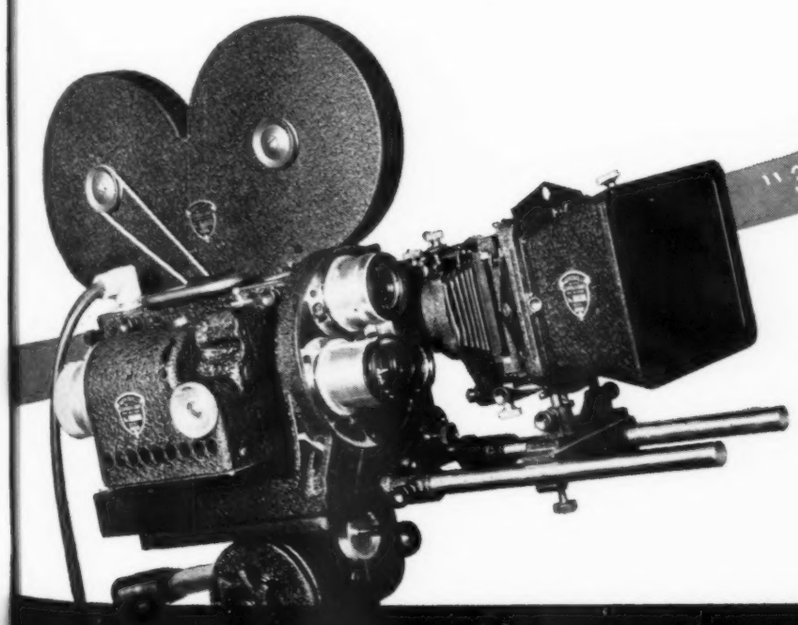
HARRY STRADLING, A.S.C., goes to Samuel Goldwyn Studios as head cameraman

(Continued on Page 224)

The great films of Today are shot with a *Mitchell**



The MITCHELL STUDIO MODEL "BNC" is a truly silent camera for sound photography. No blimp is required. Its smooth, positive operation saves many costly hours of production time. Since the introduction of the "BNC," more and more major studios have made it standard equipment.



"35 mm QUALITY ON 16 mm FILM

The MITCHELL "16" is enthusiastically acclaimed by leading commercial producers as the first professional camera to bring theatre-like quality to the 16 mm screen. Typically MITCHELL in design and workmanship, it contains the same proven features that made MITCHELL cameras famous throughout the world.

Now at a new low price.

Mitchell Camera CORPORATION

666 WEST HARVARD STREET • GLENDALE 4, CALIFORNIA • CABLE ADDRESS: "MITCAMCO"

EASTERN REPRESENTATIVE: THEODORE ALTMAN • 521 FIFTH AVENUE • NEW YORK CITY 17 • MURRAY HILL 2-7038

* 85% of the motion pictures shown in theatres throughout the world are filmed with a Mitchell

BEHIND THE SCENES — The camera shown here being used for a moving closeup of Kirk Douglas as he enacts role of a fighter in "Champion," is a combat veteran formerly employed by the U. S. armed services to photograph actual warfare. Hollywood is converting these cameras to studio use wherever realistic action scenes are needed. Second cameraman Perry Finnerman is shooting while being wheeled around the ring on a baggage handler's truck.

Champion

. . . a two-fisted picture made startlingly real by skillful photography

By RALPH LAWTON

WHEN I talked with Frank Planer, A.S.C., on the eve of his departure for Europe, he still was as enthusiastic about the photography of "Champion" as when first he started the cameras rolling on the picture several months earlier. "'Champion' has set a new precedent in the production of motion picures," he said. "There's a new method of making pictures in Hollywood today that ignores the old, so-called "star" system. Instead, it places emphasis on careful pre-production planning, on the value of an enthusiastic and tightly-integrated production crew, and recognizes the director of photography for the valuable contributions he can make in the planning of a picture as well as in its photography. 'Champion,' produced by Stanley Kramer for Screen Plays, Corp., is an example of the type of successful picture being produced by this method."

Very often, when a motion picture scores outstanding success, there is the tendency to credit all to the star of the picture; the star's success becomes the picture's success, and vice versa. Actually, of course, the star plays only a nominal part in its success. First there has to be a good story — an exceptional story — and there must be a good script. There must be a good director and a good cameraman, too. Screen Plays' "Champion" had all these.

REAL PROBLEMS in lighting and camera movement were posed for director of photography Frank Planer, A.S.C., in this Santa Monica roadside inn where much of the early action in "Champion" is played. Here scenes were shot with camera mounted on the counter or a stack of pop bottle boxes. Windows in background had to be covered with blue cellophane to permit balancing light.

LEAP FOR LIFE — Kirk Douglas leaps from a camera car and down an embankment for a scene in "Champion." In the picture it emerges as a leap from a freight train at night, through Frank Planer's cinema magic and lens filters.

IN FOCUS — A camera aide measures distance from lens to Douglas' money pocket, as Frank Planer (right of camera) prepares to film exciting scene of fight in a boxcar.

"Champion" graphically dramatizes the rise and fall of a pugilist amid the glamour and corruption of the boxing game. Briefly, the story concerns unemployed Kirk Douglas who, with his brother, played by Arthur Kennedy, are riding the rods west. The two are beaten and robbed in a boxcar by a gang of hoodlums, and escape by jumping from the car as the train moves over desolate hill country. They are picked up and given a ride to the nearest town by a kindly motorist who turns out to be a popular ring champ. This chance meeting ultimately leads Douglas into the fight game and ironically it is the motorist who is to become his opponent in a critical match at the height of his career. How Douglas gets into the fight game, works his way to the top, becomes involved with gamblers whom he double-crosses, and the inevitable result, furnished exciting dramatic opportunities not only for the picture's stellar cast of comparatively unknowns, but also for Frank Planer, who directed the photography.

Once he had a good script developed from the Ring Lardner original story, producer Kramer started his art director planning the picture. During the first pre-production conferences, on which script writer, art director, and director sat in along with Kramer, rough sketches were made of all the action in every sequence. When the story was thus planned in semi-graphic form, an artist was called in and the whole picture laid out in story board form. This constituted the basic action as developed by the producer, director, script writer and art director. They were now ready for consultation with the cameraman.

In the meantime, Frank Planer had been selected to direct the photography. Having read the script, he was given the storyboard to study and here began a series of further pre-production conferences which afforded Planer opportunity to contribute additional ideas for cutting costs, saving time or enhancing the pictorial impact of a scene. He accompanied the production staff in scouting location sites, and this gave him opportunity to pre-plan his camera setups on exteriors as well as to offer technical suggestions that would contribute further to the economy of the production.

But the most important pre-production planning, and probably the most time- and money-saving was the rehearsal sessions held before the camera started shooting. Before a single scene was filmed,

(Continued on Page 216)

AT TWENTIETH CENTURY-FOX studios, Sol Halprin, A.S.C., (center) supervises both the laboratory and the camera department, which accounts for the consistent high quality of TCF's films. Here he consults with his two capable assistants, Tom Ingman (left) and Henry Goldfarb.

It's The Print That Counts

After the takes are canned and sent to the lab, exacting methods of testing, developing and printing follow to insure maximum pictorial quality on the screen.

By CLEMMIE GALLOWAY

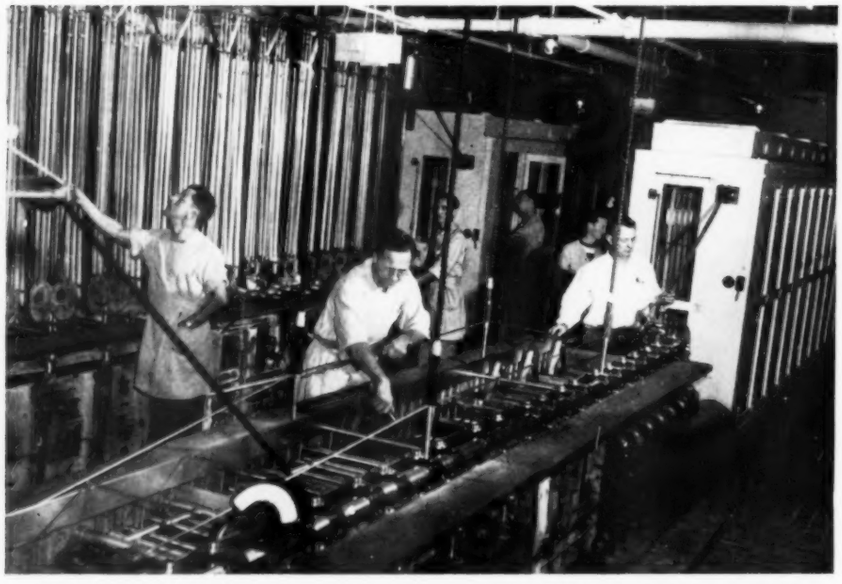
THE DIRECTOR of photography's interest in the film he daily exposes in his camera does not cease with its exposure and subsequent removal to the laboratory for processing. After it is shot, just as much detail and attention is expended on it in the laboratory to insure the maximum of photographic quality. The cinematographer's immediate interest continues until the film is developed and printed and the rushes screened in the studio projection room. It is the daily rushes, which every cameraman sees screened when time and schedules permit, that enable him to keep a check on his immediate work — lighting, exposures, composition, etc.

In some studios, like Twentieth Century-Fox, the two operations — photography and processing—are considered so interrelated that one man supervises both the cameramen and the men who develop and print the films. The overall responsibility for the high quality of TCF's films is that of Sol Halprin, A.S.C., who, besides being superintendent of the laboratory, is head of the camera department.

The scientific precision, exactitude, and cleanliness of a hospital operating room are found in the TCF Western Avenue laboratory. The stress on cleanliness is of utmost importance for if any dirt gets on the film it will mar and even scratch the negative and consequently be visible on the prints.

As in an operation the patient's life depends on the skill of the surgeon and the perfection of the implements, the studio's life — the day's shooting of film — depends on the skill of the laboratory workers and their equipment.

Concentrated in that can of film arriving at the laboratory at the end of each day is a fortune. The many millions of



THE TCF negative developing crew works unhamered in total darkness, relying upon keenly developed sense of touch and timing. Negative film is developed at rate of 90 ft. per min.

THE PICTURE negative is tested on Cinex testing machine by Harry Rehman who prints the specimen guide strips.

dollars spent each year is represented on that bit of celluloid.

Before the processing of film begins at 6 o'clock in the morning, the night crew has already completed its work of washing the developing machines, changing developing solutions, and doing everything necessary to enable the day crew to start immediately so that the daily rushes can be ready for screening before TCF's studio executives by 4 o'clock in the afternoon.

No actual production negatives can be developed until sensitometric strips are developed and read to insure that the density and contrast of the developing solutions are correct. The strength of the solutions must be the same, not only for a given day's work but from day to day, and this is accomplished by developing and reading sensitometric strips continuously while the developing machines are in operation.

Before the negatives are sent into the developing room, the cans containing sound film are separated from those containing picture film. The foreman of the negative developing room and his crew work in Stygian darkness by sound and feel, rather than by sight.

The next step occurs in the testing room. Sound negative is timed on a densitometer and the picture negative is tested on a Cinex testing machine. The latter machine prints a strip of film about nine inches long in one-frame exposures from each negative scene to be printed, each frame changing in density from lights 1 to 22. These lights match in density with the corresponding lights on the printing machines.

After the Cinex test is developed, it is taken to the timing room where the printing light best suited or each scene is determined. The negative is then cleaned and taken to the printing room where it is printed on model D Bell & Howell printing machines. Each scene has a small notch in the edge of the film, near the first frame. When this notch contacts an "interrupter" in the printer mechanism it rings a buzzer which indicates to the operator that a change in printing light is required. This change is made manually by the operator. Although there are 22 light changes on the printing machines, most of the negatives at TCF stay within a range of three or four printing lights.

After the negatives are printed, prints are taken to the positive developing room for processing. The negative is then broken down or separated into individual scenes and filed in vaults according to the production category. The developed positive print then moves to the positive assembly room where it is assembled, synchronized for picture and sound, and then waxed. Waxing prevents the freshness of the emulsion from gumming up the projection machines and consequently tearing the film.

In the projection room all picture prints are reviewed individually to insure that both picture and sound quality are correct.

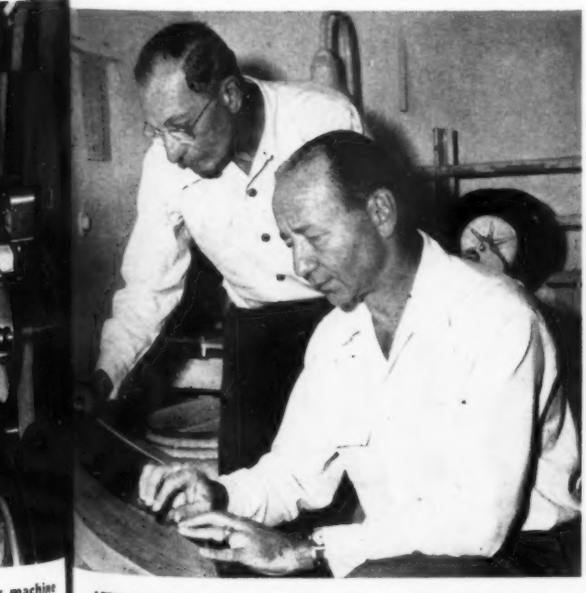
The laboratory operates without any waste of film, and salvages all waste silver from the used hypo solutions. Raw film averages from 1½ to 2½ ounces of silver per thousand feet, and after it goes through the hypo bath in course of development, the unused silver is removed from the emulsion. The silver thus salvaged is molded into bricks which assay over 99% pure silver. Each brick weighs about 90 pounds and at present there are 19 bricks on hand, stored in vaults, to be sold.

The master print of each production, like a designer's pattern, is sent to the laboratory where the negative is cut to match it, so that the finished prints intended for showing in the nation's theatres each will conform with the master print.

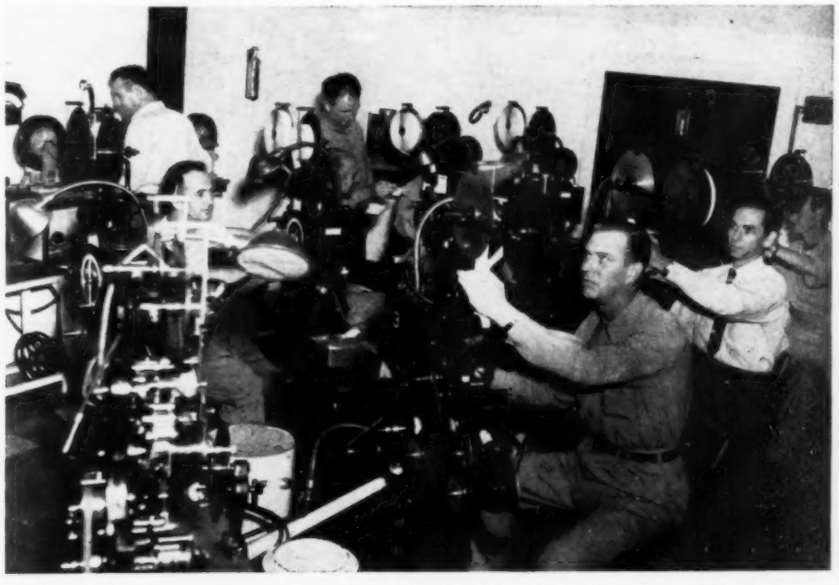
Thus setp by step, the film emerges from the camera; goes to the laboratory, where it is given pre-developing tests, then developed to a negative. The negative is then tested to determine correct printing lights, and the positive prints for projection made. These in turn are waxed to safeguard emulsion against damage. The original negative, then, is broken down into individual scenes or sequences and filed in fireproof vaults.

"Exactitude and precision are necessary in every phase of laboratory work," said Sol Halprin, adding, "The developing solutions and film drying cabinets must be kept at a definite temperature, for if the temperature varies the density of the film would vary."

Negative film is developed at the rate of approximately 90 feet a minute, according to Halprin, and positive film at approximately 160 feet per minute. During 1947, just to take the handiest record, 21,652,189 feet of film was processed at Twentieth Century-Fox's laboratory. According to Sol Halprin, this figure will be greatly exceeded during 1949. Contributing footage during 1949 are cinematographers L. B. Abbott, Lloyd Ahern, Arthur Arling, Norbert Brodine, Walter Castle, Charles G. Clarke, James Gordon, Edwin and Ralph Hammeraas, Allan Irving, Harry Jackson, Milton Krasner, Joseph LaShelle, Joe MacDonald, Arthur Miller, Ernest Palmer, Leon Shamroy, Edward Snyder, J. O. Tayler and Dewey Wrigley—all members of the A.S.C.



AFTER the Cinex test, Fred Danashew and John Fritch determine the correct timing and printing light for film.



ONE OF the large printing rooms at the Twentieth Century-Fox laboratories, which operates in total darkness. All printing is done on model D Bell & Howell printing machines.

ONE OF several scenes in "The Fountainhead" in which Bob Burks, A.S.C., combined skillful lighting and camera work with an excellent process plate and miniature structure to produce an effective pictorial composition. The angular appearance of background structures in this picture was caused by peculiarities of the still camera lens, is not apparent in the production scene.

Robert Burks, A.S.C., Photographs

The Fountainhead

By HERB A. LIGHTMAN

"THE FOUNTAINHEAD," as produced by Warner Bros. Studios, is a handsomely mounted, beautifully designed, and imaginatively photographed motion picture. Adapted from Ayn Rand's best-selling novel of the same name, it is the sophisticated story of an architect whose extremly advanced ideas of functional modern architecture place him in constant conflict with those who favor the outmoded cliches of pseudo-classic design.

Simply stated, it is the story of a clash between two sharply opposed artistic ideologies which the author uses to symbolize a broader conflict between the forces of progress and reaction. Interwoven with this lofty theme is a torrid romance between the incredibly "calm, cool and collected" architect and a beautiful young heiress who quite obviously suffers from an excess of hormones.

Interspersed with the amorous thrashings-about of these two worldly creatures is a good deal of philosophy based upon the concept that a man's artistic ideals are sacred and inviolable, and that he has a right to defend same even if it means blowing up a whole housing project. Fans who enjoy reading the highly popular novel may ponder the usual conjecture as to whether the film is as good as the book. Those who view the film without having read the book may find the continuity a bit jumpy as the result of motivating situations which had to be omitted in order to boil the story down to normal running time. But ignoring pros and cons as to the picture's dramatic worth, it must be agreed by all hands that "The Fountainhead," judged purely from the viewpoint of visual presentation, is a brilliantly conceived and executed blend of camera art and architecture.

Robert Burks, A.S.C., one of Hollywood's youngest and most original directors of photography, combined lens and light-

THE architecturally modern interiors of "The Fountainhead" combined beauty of functional design with economy of set construction, simplified the lighting.

THE QUARRY location with its jutting rock shelves and massive monolith afforded wide play for Burks' compositional talents with striking pictorial effect.

ing to produce a clean modern style of photography that is perfectly keyed to the mood and theme of this unusual story. Burks worked very closely with director king Vidor and art director Edward Carrere in pre-planning the visual conception of the film. They all agreed that the settings and camera approach should be kept as simple as possible, since simplicity and functionalism were fetishes with Howard Roark, the story's hero.

"Our main problem," Burks points out, "was to present our story in sharply dramatic fashion, without cluttering it up with frills of technique. This meant that settings and camera treatment had to be designed to complement each other, and to accentuate the impression of dramatic simplicity. The sequences dealing with the protagonist and his functional ideas were presented in this manner. By way of dramatic contrast, the sequences dominated by characters representing the old-fashioned approach to building design, were photographed in a conventional style. By contrasting the two types of photography we aimed to sharpen the gulf between the two opposing trends of thought in the story."

Using this formula of camera treatment, the photography became a graphic ally of the hero—an effect which is, of course, *sensed* rather than consciously noticed by the audience. Throughout these sequences, single lighting units were used as source illumination and a minimum of fill light was employed in order to preserve the clean black and white quality that is so forceful in pointing up the action.

The photography of the film draws great power from the dynamic compositions which the cinematographer used to frame his scenes. The sweeping lines of the modern architecture formed excellent patterns with which to work, and Burks

(Continued on Page 220)

GARY COOPER, who plays Roark, checks a camera set-up while Burks (right) and director Vidor look on.

SUCCESS and scope of the Berlin airlift provided newsreel photographers in Europe with first real postwar "news subject." John Dored, A.S.C., covered the activity in all its phases for Paramount News.—Int. News photo.

Newsreeler's Dilemma

Our changing world poses problems for the newsreel photographer, too

By JOHN DORED, A.S.C.

John Dored, A.S.C.

IF, AFTER DISCHARGE from the army, a Hollywood cameraman returned to his former studio and found the stages in ruin and his best actors gone and replaced by new faces devoid of personality and color, he would most certainly feel at loss for incentive. This was my reaction, however, when I came back from the last war and resumed work at my old "studio," Western Europe.

Since the beginning of newsreels, I have been covering world events with a motion picture camera, and since the inception of Paramount News, I have been roaming the continent supplying footage for our "make-up days" back in New York. From the start, I specialized as a roaming newsreel reporter—due partly to my own desire and partly because I was already equipped with international experience and a number of foreign languages. Paramount sent me all over the globe, of course, but the most interesting happenings occurred in Europe. The continent became my special "stage." Its dictators and its kings, its generals and its politicians, all became my "actors," and its capitals and colorful country-sides my picturesque stage settings.

When World War II broke out, I covered the Polish campaign and afterwards was sent to South America on a "good neighbor" film assignment. In the spring of 1944, I joined our armies in Italy. Working my way through France and Germany, I had reached Czechoslovakia by V.E. day.

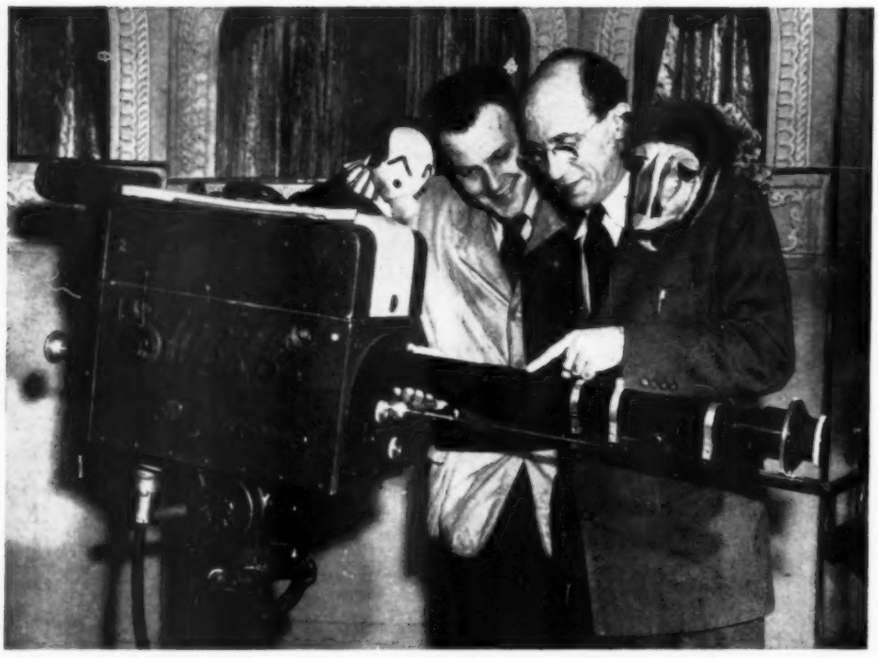
Now no longer a war correspondent, Paramount assigned Frankfurt-Maine or Berlin as my base of operations, and from there I again began to roam around the European stage. That many of my old stage settings

(Continued on Page 213)

How Zoomar Aids TV Photography

Vari-focal lens permits entire show to be photographed with one camera to gain consistency in image quality.

By VICTOR FORD



DR. FRANK G. BACK, (right) explains to Burr Tillstrom, producer and star of "Kukla, Fran and Ollie," the one-camera television Zoomar show, how the lens' 26 optical elements work to produce zoom effects. Zoomar is only lens used on camera and is operated by a single knob at rear, below camera viewfinder.

WHEN Dr. Frank G. Back devloped the Zoomar lens for cinematography, he had not considered the advantages it also would offer television cameramen, mainly because television photography was virtually still in its infancy. But now the Zoomar is assuming importance as the TV cameraman's most important accessory. It does the work of four lenses and in some instances dispenses with the need for a second camera in covering studio programs.

The Zoomar's application to television in one respect is even simpler than when it is adapted to cinematography, because there is not the need for a special zooming viewfinder. With the TV camera, what the lens sees the cameraman also sees in exact image in the camera's electronic viewfinder.

The lens' name, Zoomar, suggests its function: that of zooming from close distrances to far, and vice versa. It is a varifocal lens in that by a simple mechanical adjustment the focal length of the lens may be varied within certain limits. With the Zoomar lens made for use on movie cameras, which is slightly different in mechanical details from the type used in television, this change is made by moving a lever attached to the lens barrel. Changing the focal length thus, an apparent change in the proximity of the viewer of the film or of the television screen takes place. In other words, if the change is from the minimum focal length to the maximum, it appears to the viewer that he has started way back from his subject and has been carried up close for a better view, without the customary cuts from long to medium to closeups shots which is general practice in movie making. All this, of course, without the camera's physical position being altered.

There are twenty-six elements in the Zoomar lens compared to the average of perhaps six or eight in the more complicated of ordinary camera lenses of fixed focal length. In the early stages of the lens' development, this immediately posed the problem of light absorption and reflection, for at an air-glass surface, as much as 10% of the light may be lost in reflection. With 26 lenses in the Zoomar, this meant 52 air-glass surfaces —52 times 10%. The answer, of course, was coating, which reduced reflection to approximately 1%.

The Zoomar has two interchangeable front lenses. One for wide angle and the other, a tele-front lens, for closeup work. There is also a short range adaptor for use in ultra-closeup work, but this attachment has little application in the field of TV photography.

In the model for television, shown in the photo, the zooming range with the wide angle front lens is from 2 inches to 9 inches. Lens speed is from f/5.6 to f/22 when used from 2 to 12 inches, and about f/8 in the region of 12 to 18 inches. The difference in field coverage in any one continuous shot is nine inches or a three-to-one diameter change. The difference in field coverage can be greatly increased to 36 times by the use of a compound shot using both front lenses.

Main difference between the Zoomar television lens and the one for movie work is in the mechanical method by which the inside barrel is moved. In the movie type it is done by means of a lever arrangement underneath the barrel. In the television type, barrel movement is accomplished by means of a rod that extends beneath the full length of lens, through center of the turret and camera and back to the turret shift handle in back of the camera. This method was adopted since size of the TV camera prohibts the cameraman handling the lens

One of the main advantages of the Zoomar is its psychological effect. It can give a complete picture and a detailed picture and yet not have the disconcerting choppiness of cutting back and forth from one camera to another with different lenses on each. The video viewer has the tendency to lose either the trend of thought or become lost in the relative positions of the camera and the subject being viewed when this cutting, or camera switching, is done.

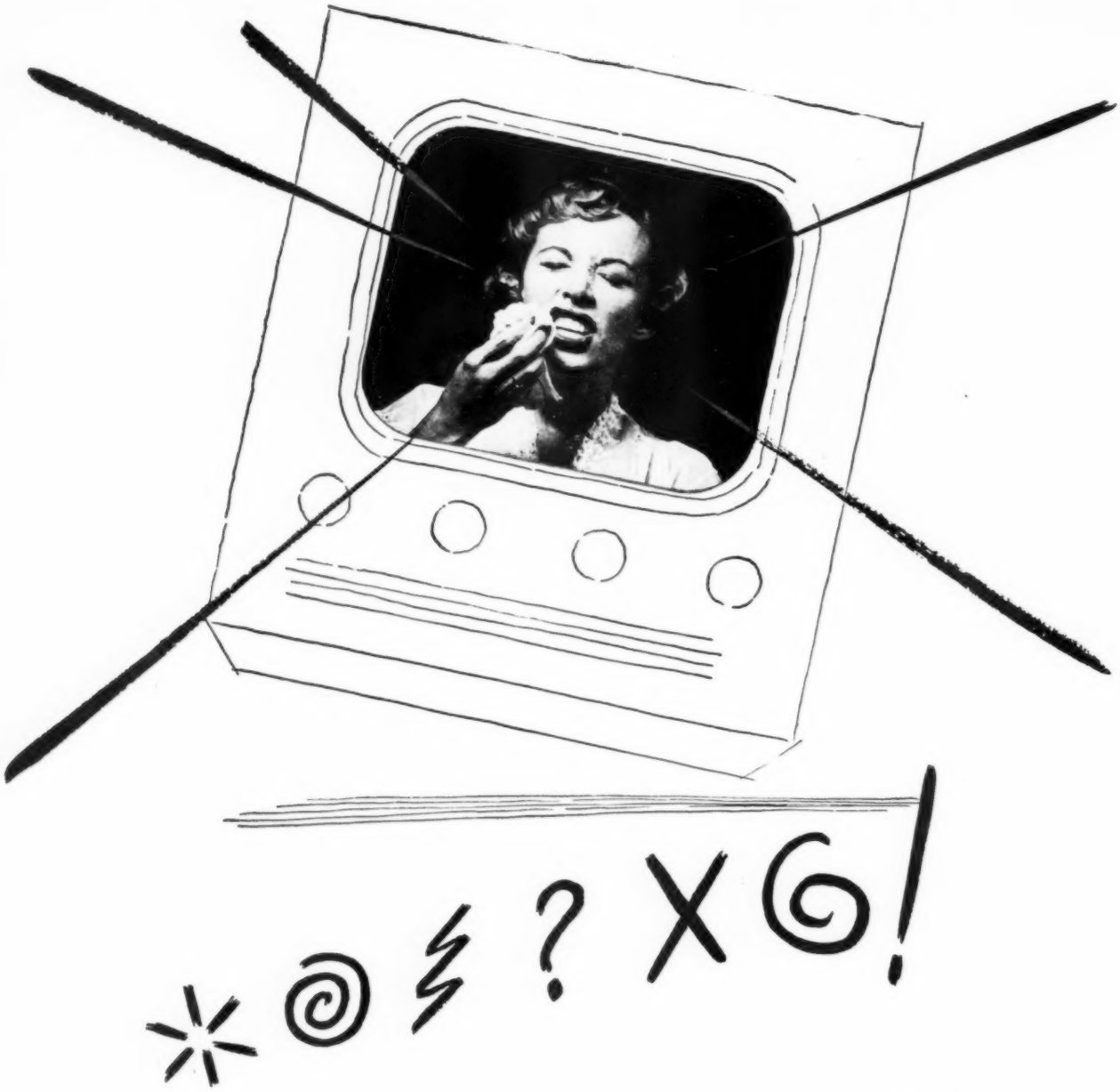
It remained for Harry Birch, chief cameraman of WBKB, Chicago, to discover still another and far more important advantage—the ability to overcome the difference in the response between two different TV camera tubes. Birch is using the Zoomar exclusively in photographing the "Kukla, Fran and Ollie" show.

"This show would not be the show that it is," Birch said, "without the aid of the Zoomar. Up until last fall, at which

(Continued on Page 214)

In Negative—
Your first
Positive thought is
EASTMAN
PLUS X

J. E. BRULATOUR, INC.
Distributors



You've seen this, or something else "unfortunate," on too many live TV shows. It simply couldn't happen if the show were on 16-mm film.

The Maurer — most widely used 16-mm Professional Motion Picture Camera.

J. A. MAURER, INC.
37-03 31st Street, Long Island City 1, N. Y.

16mm maurer

16-mm Professional Production Equipment

Pushbutton Cinematography

Television Employs It To Record Programs For Re-broadcast

By FREDERICK FOSTER

A NEW TYPE of motion picture photography came into existence with the advent of television. It is called kinescope or kinephoto photography. It is unique in that it calls for no cameraman, as we know cameramen today, and it isn't necessary to adjust lights and take exposure readings each time before starting to shoot. Actually, this movie making may be justly termed "pushbutton photography" because it operates that simple.

Kinescope photography or "kinescoping" has to do with photographing—usually on 16mm. film—television programs directly off the tube for re-broadcast. The camera is in fixed position, requiring little or no more attention than loading and unloading the film. The lens stop and focus are pre-set. All the operator has to do to start shooting is press a button that starts the camera's motors turning.

Equipment designed by RCA to record television images on motion picture film was given its first public showing at the National Association of Broadcasters' convention in Chicago recently.

Already in operation in a number of the nation's key network stations, this equipment is filming hundreds of thousands of feet of TV program material each week for delayed broadcast, for documentary, historical, legal, and advertising purposes, for syndication to remotely located network stations, and for re-broadcast because of difference in time zones.

The system consists of RCA Kinephoto Equipment (Type TMP-20B it says in their catalog), which is basically a projection-type kinescope with its associated video amplifier, deflection circuits, and power supplies; and a suitable 16mm. sound motion picture camera. The kinescope and camera are mounted on a double cabinet rack which houses the amplifiers, power supplies, control panel, and oscilloscope.

The equipment utilizes standard RMA video signals supplied directly to the equipment from the switching system in the television studio. The signal is fed to a video amplifier, where it is amplified and separted into a signal for synchronizing the scanning raster of the kinescope with that of the television pickup camera, and a modulating signal which is amplified and used to control the kinescope beam which forms the visual image.

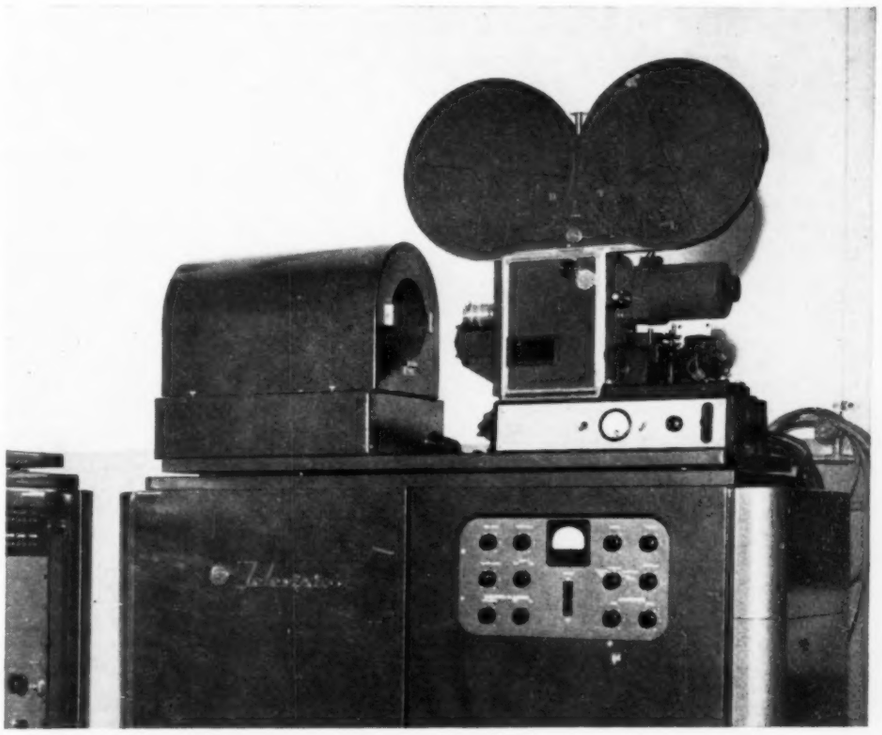
The kinescope, RCA Type 5WJ11, is a special 5-inch flat-face aluminized projection-type cathode ray tube having a short persistence blue phosphor screen of high actinic value, which makes possible the use of high-resolution, low-cost positive-type film stock. The equipment has been designed and manufactured to the high quality standards set by the broadcast industry.

In addition to the TMP-20B Kinephoto Equipment, the system requires a 16mm. motion picture recording camera, such as the Model TK-75-B camera developed by RCA especially for use in television. This camera compensates for the timing differences between the television system, which has a scanning frequency of 30 complete frames or 60 interlaced fields per second, and the conventional motion picture system, which exposes film at the rate of 24 frames per second. Since 1/12 of a second is the time interval for five interlaced television fields and for two frames of film, compensation can be made by exposing each film frame for the duration of two television fields and advancing the film during an interval representing one television field out of five.

Because of differences in phasing, each film frame may represent parts of as many as three television fields, but a precision timing shutter and pull-down mechanism provides for precise matching between the cutoff point in one field and the point of pickup in the next.

The camera exposure time in terms of the television system must be accurate to less than one half of a scanning line, or roughly one part in 30,000. It must be timed to expose exactly the proper number of picture lines for each frame, or 525 lines, no more or less, or an effect known as "banding" will take place on

(Continued on Page 218)



IN FIXED position, with focus and exposure pre-set, camera at right photographs on 16mm. film television programs from face of kinescope tube within housing at left. This is latest RCA kinescoping equipment as used in NBC's television studio in Hollywood, and many other TV studios throughout U. S.

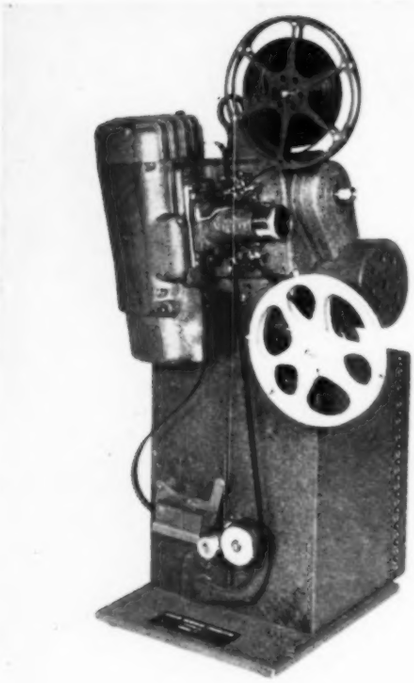


FIG. 1—Side view of a silent 8mm. projector which has been converted into a complete unit for both recording and playback of synchronized sound recorded magnetically on edge of the film.

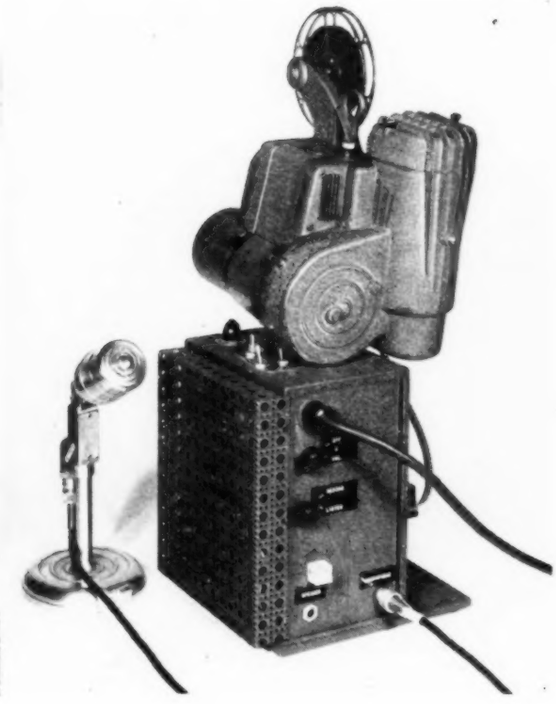


FIG. 2—Rear view of same projector, showing controls. The commercial jobs will be considerably refined in appearance and more compact. Not shown is the speaker unit which is placed near the screen.

On The Way—Magnetic Sound For 8mm!

Dr. A. H. Leedy, Director of Armour Research Foundation, reveals developments that promise early appearance of magnetic sound projectors for 8mm. home movies.

FOUR MAJOR manufacturers of cine cameras and projectors will shortly announce their new magnetic sound 8mm. film projectors. Since a laboratory model of a converted silent projector was developed by the Armour Research Foundation of Chicago, four equipment manufacturers here and one abroad have obtained licenses to use the foundation patents, which means that very soon, now, movie amateurs will be able to realize a long promised adjunct to their home movies—synchronized magnetic sound.

Of course, all developments have been kept under wraps and much of the progress has been confidential development and tooling up for production, which is expected to start before the end of the year. Therefore, no specific details are available at this time on any of the new projectors. However, when finally they are available, it will mean that, not only will the movie amateur be able to screen 8mm. movies in sound, but will be able to record sound magnetically on his own movies films for showing on these same machines. The application of the magnetic sound medium — a fine metallic emulsion—will in all probability be a commercial service provided by film companies: they will put a magnetic sound track on exposed or unexposed 8mm. film for a fee. Also, it is likely that rolls and magazines of 8mm. films will shortly thereafter become available with the magnetic flux for the sound track already applied to the edge of the film.

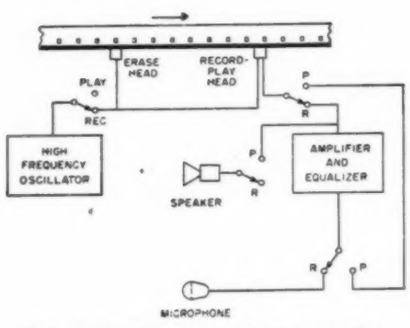


FIG. 3—Diagram of an 8mm. magnetic sound projector circuit.

The Armour Research Foundation of the Illinois Institute of Technology has pioneered in the development of magnetic sound in this country, both on wire and tape, and later on film. Very early in their research they discovered, mainly through the tremendous interest in magnetic sound evidenced by hundreds of amateur movie makers who wrote them, that one of the most logical applications of magnetic sound was in the field of home movies where, up until this time,

(Continued on Page 219)

Again available! *Cine-Kodak Special II Camera*

Now fitted with superb new Kodak Cine Ektar *f*/1.4 Lens

Professional movie effects with amateur ease

This is the one 16mm. movie camera with which you can create most of the unusual screen effects ordinarily produced by special and expensive laboratory treatment. The controls are built into the camera itself!

Fades, dissolves, mask effects, double and multiple exposures, montages, animation, slow motion, and speeded motion—all can be achieved from the camera position. The reflex finder permits precise focusing and framing, requires no rack-over, eliminates parallax, does away with the need for titlers, allows really big close-ups. The wind-back shaft rules out the need for backing up film in a darkroom. The single-frame shaft even permits time exposures for dark scenes ordinarily beyond the reach of the fastest lens.

Imagination—only—limits its range

Name your effect. With the "Special II," you can have it! Animated titles . . . maps . . . diagrams . . . "self-assembling" machines. Tremendously speeded action or time-lapse studies. All are easy with the "Special II."

Comedy situations, wherein big men vanish behind small trees . . . shiny new cars are transformed into battered flivvers . . . a screen character greets himself in mid-screen, is "beside himself" when and where you desire. The old and the new, the rich and the poor, the fast and the slow—all can be on the screen at the same time when the movie is made with the "Special II."

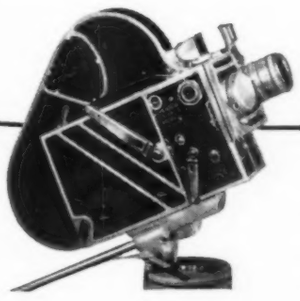
Title exposures against moving backgrounds . . . ghost effects wherein the background shows through the subject . . . fades against an unchanged background. These effects, and scores more—all under perfect finger-tip control—are simplicity itself with this camera.

Small wonder Cine-Kodak Special II Camera is the first, and last, choice of the serious worker . . . the advanced amateur. Good news that production is once again in step with demand. Your Kodak dealer will be glad to accept your order for a Cine-Kodak Special II Camera—now!

Finest lens ever made for 16mm. motion picture cameras. The Kodak Cine Ektar 25-mm. *f*/1.4 Lens meets the highest standards of definition and edge-to-edge sharpness. Aided by the unique optical qualities of Kodak rare-element glasses, Lumenized glass-air surfaces, blackened lens rims, beveled flanges, and a new precision mounting of all elements, it provides superb image quality, excellent contrast and color purity, and unmatched flatness of field in addition to its extreme speed. And with the complete line of accessory Kodak Cine Ektar Lenses in a wide range of focal lengths also now available, still further scope and variety can be given to your film shows. Ask your dealer for the free Kodak booklet, *Kodak Cine Ektar Lenses*, which describes them in full detail.

Eastman Kodak Company

Rochester 4, N. Y.



The basic model of the Cine-Kodak Special II Camera is equipped with a 100-foot capacity film chamber and the 25mm. *f*/1.4 Kodak Cine Ektar Lens. It may be purchased with a 200-foot capacity film chamber and the same lens—shown at left—or with either chamber and a 25mm. *f*/1.9 Kodak Cine Ektar Lens. In one of these four forms, this fine camera will meet your every film-making requirement.

"Kodak" is a trade-mark

Kodak

Cutting The Commercial Film

Since subject matter of the average commercial film is often unexciting, the film editor must accept the challenge of making the film move along and hold interest.

By CHARLES LORING

TO THE uninitiated, the expression "cutting a film" simply means getting rid of the scenes or parts of scenes that you don't want to appear in the finished feature. The implication is that a motion picture is created by the process of elimination, and that after the unwanted footage ends up on the cutting room floor, what is left will automatically fall into an acceptable visual pattern suitable for showing to an audience.

This is only partially true. While it is granted that the preliminary step is to cull out the unwanted footage, the real process of cutting or editing depends upon correctly assembling the scenes that you have decided should appear in the finished product. In cutting away the deadwood you are merely clearing the decks for a phase of production that is highly creative and constructive, and indeed upon which the whole meaning of the finished film may depend.

Each separate motion picture scene has a certain limited meaning, but it is only a very small part of a much greater whole. The individual scene takes on its real meaning in the overall pattern depending upon the scenes immediately preceding and following it. Sometimes a direct visual connection exists between two or more scenes placed together—but even scenes which have no visual relationship take on a unique and interrelated meaning when cut together. Thus, if you show a bird flying and then cut to a close-up of a man looking skyward, the audience naturally assumes that the man is looking at the bird.

In the commercial film, as in any other type of motion picture, skillful cutting is of the utmost importance. Many such subjects gain their force and meaning, not from the scenes themselves which may be very ordinary), but from the imaginative way in which those scenes are cut and edited. Since the subject matter of the average commercial film is all too often somewhat less than exciting, the film editor must accept the challenge of making the film move along so that audience interest does not lag.

In the commercial film, cutting should actually begin when the script is written. The writer, the director, and a technical advisor representing the client should agree as to which are the most important phases of the story, and then make sure that these elements are pointed up through the use of sufficient close-ups. If this is indicated clearly in the script, the editor's job is greatly simplified, since he can use that script as a bluprint and know exactly where to cut each scene.

In the how-to-do-it or "nuts and bolts" type of educational-commercial film, the important aim is to convey information or the details of a process in such a way that the full meaning is clearly understood by the audience. The editor must avoid cutting the action so fast that important details are slighted or left out entirely. If this occurs, even though the action may seem to have a nice active pace, the film will fail in its prime purpose.

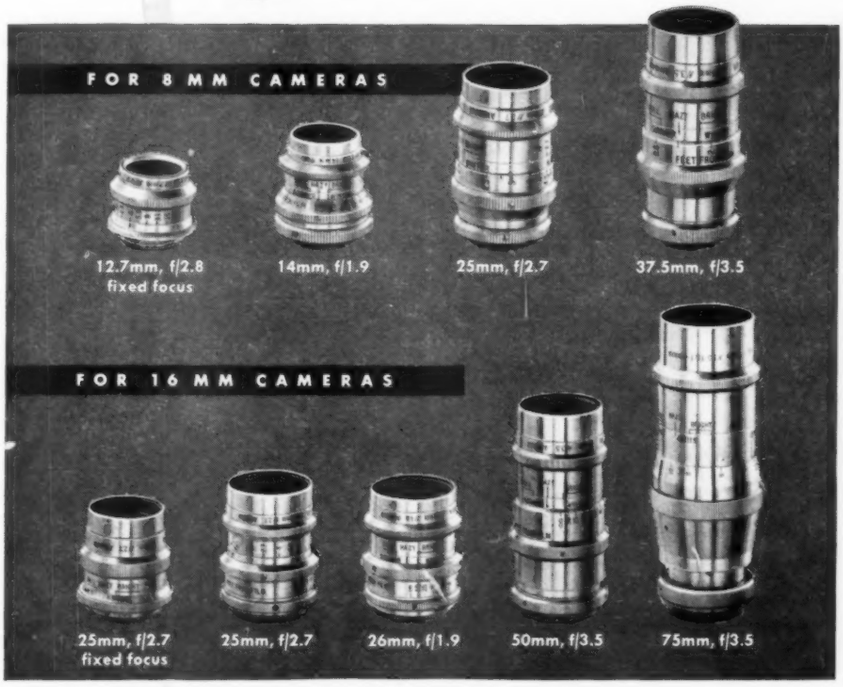
On the other hand, the institutional film (the main object of which is to create good will for the client) can benefit greatly from a fast style of cutting which tends to add dramatic pace to the unfolding of the story. Cut the action rapidly enough that the audience will want to stay with the subject and so that interest will not bog down.

Continuity is born in the script, advanced through proper direction of the action, and smoothly resolved in the final editing. Thus, correct cutting alone will not insure smooth continuity, and the responsibility of the flow of the film narrative should not be thrown upon this one phase of production. An imaginative editor, however, can find elements of visual continuity between totally unrelated scenes and cut them together in such a way as to lead smoothly from one to another. For example, a turning wagon

(Continued on Page 215)

THE EDITOR runs the film through a viewer or Moviola, marking with grease pencil the frames where he feels cuts can be made to best advantage. Using these marked frames as a guide, he then cuts and deletes unwanted frames or footage. Here Leonard Shafitz watches screen of his Moviola preview machine as he edits an industrial film for Reynolds Metals Company.

9 NEW Bausch & Lomb CINÉ LENSES

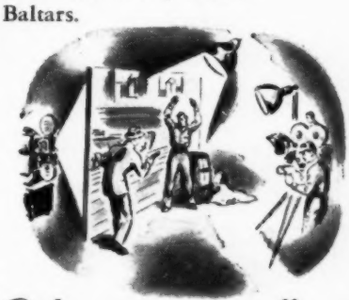


Now You Can Have TOP IMAGE QUALITY in Ciné Lenses

Now, it's Bausch & Lomb Animar Lenses . . . for *professional* quality in *your* movies. For many years, the world's leading cameramen in the big name studios of Hollywood have preferred Bausch & Lomb Baltar Lenses. Hollywood's finest motion pictures have been filmed with Baltars.

All of the experienced lens design and manufacturing know-how, accumulated by Bausch & Lomb in producing lenses for super-critical motion picture cameramen, has gone into the development of the new Animar series of lenses.

Now you can have crisp, sparkling, brilliant images . . . TOP IMAGE QUALITY . . . that films movies in their full magnificence of fine detail, subtle tone, and brilliant color. *Use* Bausch & Lomb Animar Lenses.



"For professional quality in Your movies"

FREE FOLDER!

Get your FREE copy of this new folder on Bausch & Lomb Animar Lenses from your local dealer . . . or write Bausch & Lomb Optical Co., 545-F Smith St., Rochester 2, N. Y.

BAUSCH & LOMB

8mm and 16mm

ANIMAR LENSES

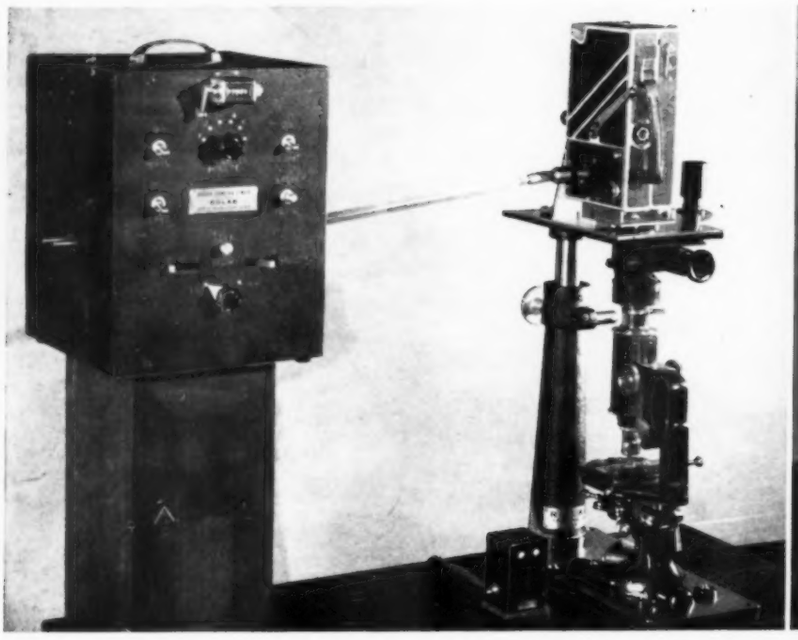


FIG. 1 — Showing Roger camera timer in use operating a Cine Kodak Special 16mm. camera in recording a microscopic study in time-lapse sequence. The timer may be regulated to expose pictures ranging from 1 to 8 per minute or 1 to 24 per hour.

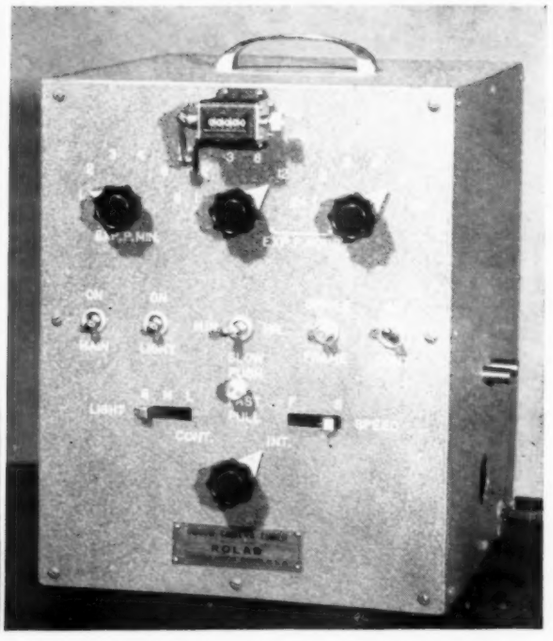


FIG. 2 — On control panel are frame counter, dials for regulating exposure interval, light switches and speed control. Timer operates continuously or intermittently.

Camera Timer For Time-lapse Cinematography

By JOHN FORBES

TIME-LAPSE cinematography has become increasingly important in the production of industrial and scientific 16mm. films. At the Rockefeller Institute for Medical Research it was used by Dr. Alexis Carrel for making micro-cinema studies of living cells and tissues and blood, and of bacteria. The U. S. Department of Agriculture has been using time-lapse photography in its motion picture department for about fifteen years, for recording plant and animal life.

Camera timers, developed by the Rolab Photo Science Laboratories at Sandy Hook, Connecticut, are being used extensively to record on 16mm. film the growth of various plants, such as mushrooms and other fungi; opening of flowers; budding of yeast and starting from a single cell; growth of bacterial colonies and single bacteria; capillary action of dyed liquids in the grain of wood; and the formation of ice crystals and their peneration into pores of wood to prove adhesion, as legal evidence.

By time-lapse or stop-motion cinematography is meant motion pictures of comparatively slow actions that appear to be speeded up when projected upon the screen. We may presume that film records of actions taken at any lower frequency than normal projection speed would belong to this category because they are more or less speeded up when projected. For practical reasons we may say, however, that useful time-lapse work ranges between one frame per second and one frame per hour.

The filming of motion pictures of this type is, of course, very simple, aside from some experience in determining the proper time-intervals between exposures. Provided the illumination is constant, the camera needs only to be operated at the proper speed by hand or motor. Many types of automatic driving mechanisms, more or less complicated, have been constructed—mostly home made affairs, serving only limited purposes—and because of the increasing use of time-lapse work in recent years, Rolab Photo Science Laboratories have developed an efficient camera timer for this work which they are producing commercially.

The Roger timer, which is illustrated above, is the result of Rolab's more than 30 years practical experience in time-lapse cinematography as applied in a scientific and industrial research laboratory, where accuracy and excellence of results are of prime inportance and where the attention of the operator should be focused upon the object itself rather than upon manipulation of the camera. Obviously such a timer must be compact and portable, automatic, easy to operate, and foolproof.

The Roger camera timer consists of a number of integrated units assembled in a light carrying case that may be mounted on a tripod or other suitable stand set up next to the camera, as shown in Figs. 1 and 2 above. The timer is connected with the camera by means of a telescoping shaft fitted with two universal joints, or by a flexible shaft. As may be seen in Fig. 1, shaft extensions or connections are on either side of the timer so that the instrument panel always faces the operator at all times, whether the camera is horizontal, as for straight photography, or vertical for closeup or microscopic work, as shown in the photo.

The timer apparatus consists of the following parts or features: (1) minute timer, (2) hour timer, (3) camera motor, (4) frame (exposure) counter, (5) relay mechanism for intermittent and continuous operation, (6) the automatic light control mechanism, and (7) instrument panel.

The minute timing device consists

mainly of a synchronous motor, a contact disk assembly, and a commutator switch. It can be set to operate camera to expose 1, 2, 3, 4, 6, and 8 pictures per minute.

The hour device is of similar construction, and includes synchronous motor, contact disk assembly, and commutator switch for 1, 2, 3, 6, 12, and 24 pictures per hour. It has, in addition, a contact mechanism that insures uniformly exposed pictures.

The motor operating the camera is of the silent precision type, with speed governor and gear-shift assembly for two speeds. The frame-counter registers single exposures and can be re-set at any time.

The mechanism for intermittent and continuous operation plays an important part in the timer performance, and the intermittent operation may be considered a most valuable feature. It has been found that the majority of home-built time-lapse devices, operating continually, have a definite drawback because any change of time-interval usually requires lengthy readjustment of gears, pulleys, lights and camera objective, besides the making of exposure tests.

With the Roger camera timer a change of frequency may be effected by simply turning a dial on the instrument panel. This does not change the exposure time previously found correct, and was made possible by the intermittent operation of camera and light source. Between exposures, and after having turned one revolution, the motor stops completely at the moment the camera shutter is closed. A cycle begins with an impulse from the minute or the hour timing device, which activates the relay and starts the motor with intermittent mechanism. The camera lights are switched on and off in synchronism with the camera shutter, and the motor stops again at the end of the revolution.

A single lever on the panel may be turned to disengage the intermittent mechanism so that the camera will operate continuously with two adjustable speeds for frequencies over 8 pictures per minute.

Another use for the Roger timer, of course, is in the production of animated movies and animated plastilina models, sequences of which are finding increasing use in modern industrial and educational 16mm. films.

CINE CAMERA FRAME SPEEDS

By shooting at frame speeds other than the standard 16 f.p.s., a number of interesting effects can be made. For slow motion on the screen, use 32 or 64 f.p.s.; for rapid action, drop to 8 f.p.s. Allow one full stop more exposure for 32 f.p.s., two stops for 64. When dropping down to 8 f.p.s., *close* lens diaphragm one full stop.

"PROFESSIONAL JUNIOR" CAMERA EQUIPMENT

Interchangeable - Removable Head Tripods

FRICTION TYPE

Handles 16mm. EK Cine Special with or without motor; 35mm. DeVry; B&H Eyemo with motor and 400' magazine; and all 16mm. hand-held cameras. Head is interchangeable with the Gear Drive head. Both types fit "Professional Junior" standard tripod base, "Hi-Hat" and "Baby" all-metal tripod base.

GEAR DRIVE

The head, made of Dow Metal magnesium, weighs but 5½ lbs. and is interchangeable with the Friction type head. It handles all types of cameras. Snap-on metal cranks control pan and tilt action from both sides. Worm-driven gears are Gov't spec. bronze.

STANDARD TRIPOD BASE AND COLLAPSIBLE ADJUSTABLE METAL TRIANGLE

BLIMP for 16mm. E. K. CINE SPECIAL

This Blimp constructed of Dow Metal magnesium, is thoroughly insulated to afford absolute silent operation. Exclusive features: Follow focus mechanism permits change of lens focus while camera is operating in blimp. Blimp takes synchronous motor drive which couples to camera. A dovetail bracket is provided to mount an erect image viewfinder.

SUNSHADE & FILTER HOLDER COMBINATION

For use with Bolex and Cine Special 16mm. cameras. Holds two 2" sq. glass filters and a round 2½" Pola Screen with handle which can be rotated for polarization. Covers all lenses from 15mm. to 6" telephoto and eliminates need of various filters. Precision made of the finest materials. Compact, simple to assemble and dismount. May be permanently affixed to camera or quickly detached.

—ALSO AVAILABLE—

BABY TRIPODS **3 WHEEL PORTABLE DOLLYS**
CHANGING BAGS **"HI-HATS"**

Send for our catalog. It describes all our products completely

FRANK C. ZUCKER
CAMERA EQUIPMENT CO.
1600 BROADWAY NEW YORK CITY

Roster

American Society Of Cinematographers

JUNE 1, 1949

RESIDENT MEMBERS

L. B. Abbott
David Abel
Lloyd Ahern
John Alton
Wesley Anderson
Lucien Andriot
Arthur Arling
John Arnold
Jerome H. Ash

Lucien Ballard
George Barnes
R. O. Binger
Joe Biroc
Charles P. Boyle
John W. Boyle
Elwood Bredell
Norbert Brodine
James S. Brown, Jr.
Robert Burks

Walter Castle
Philip Chancellor
Dan B. Clark
Charles G. Clarke
Wilfrid Cline
Russell Collings
Stanley Cortez
Ray Cory
Edward Cronjager
Floyd Crosby
John Crouse
Russell A. Cully

Wm. H. Daniels
Mark Davis
Robert deGrasse
Clyde DeVinna
E. B. DuPar
Elmer Dyer

Paul E. Eagler
Arthur Edeson
A. Farciot Edouart

Max Fabian
Daniel L. Fapp
Vincent Farrar
Ray Fernstrom
Frank Finger
Rolla Flora
George J. Folsey, Jr.
Ray Foster
Henry Freulich
Karl Freund
John P. Fulton

Glen Gano
Lee Garmes
Maury Gertsman
Alfred L. Gilks
Irving Glassberg
James Gordon
W. Howard Greene
Jack Greenhalgh
Loyal Griggs
Burnett Guffey
Carl Guthrie

Ernest Haller
Sol Halperin
Edwin Hammeraas
Ralph Hammeras
Russell Harlan
Byron Haskin
Sid Hickox
Winton Hoch
David S. Horsley
James Wong Howe
Roy Hunt

Allan E. Irving
Paul Ivano

Fred H. Jackman, Jr.
Fred W. Jackman
Harry A. Jackson
H. Gordon Jennings
J. Devereaux Jennings
Ray June

W. Wallace Kelley
Glenn Kershner
Benj. H. Kline
Lloyd Knechtel
H. F. Koenekamp
Milton Krasner

Charles B. Lang, Jr.
Joe LaShelle
Ernest Laszlo
Charles C. Lawton, Jr.
Paul K. Lerpae
Marcel LePicard
Lionel Lindon
Leo Lippe
Harold Lipstein
Arthur Lloyd
Walter Lundin
Warren E. Lynch

Joe MacDonald
Jack MacKenzie
Glen MacWilliams
Fred Mandl
J. Peverell Marley
Charles A. Marshall
Harold J. Marzorati
Rudolph Mate
Ted McCord
Wm. C. Mellor
Ray Mercer
John J. Mescall
R. L. Metty
Arthur Miller
Virgil Miller
Victor Milner
Hol Mohr
Ira H. Morgan
Nick Musuraca

Harry C. Neumann

L. William O'Connell
Roy Overbaugh

Ernest Palmer
Harry Perry
Gus C. Peterson
R. W. Pittack
Robert H. Planck
Frank Planer
Sol Polito
Gordon B. Pollock
Frank Redman
Ray Rennahan
Irving Ries
Irmin Roberts
George H. Robinson
Guy Roe
Len H. Roos
Jackson Rose
Charles Rosher
Harold Rosson
Joseph Ruttenberg

Charles Salerno, Jr.
George Schneiderman
Charles Schoenbaum
John Seitz
Leon Shamroy
Henry Sharp
William A. Sickner
Allen Siegler
Wm. V. Skall
Jack Smith
Edward Snyder
Wm. E. Snyder
Ralph Staub
Mack Stengler
Clifford Stine
Archie J. Stout
Harry Stradling
Walter Strenge
Karl Struss
Robert L. Surtees

Philip Tannura
J. O. Taylor
George Teague
Ted Tetzlaff
Stuart Thompson
Robert Tobey
Leo Tover
Thomas Tutwiler

James C. Van Trees
Paul C. Vogel

Joseph Walker
Gilbert Warrenton
Albert Wetzel
Lester White
Harry Wild
Wm. N. Williams
Rex Wimpy
Dewey Wrigley

ASSOCIATE MEMBERS

Simeon Aller
Mark Armistead
Cecil Bardwell
Edgar Bergen
Louis A. Bonn
L. M. Combs
J. L. Courcier
George Crane
Wm. T. Crespinel
Edward P. Curtis
Ralph Farnham
Fred W. Gage
George H. Gibson
Wm. J. German
Carl Louis Gregory
Herbert Griffin
A. J. Guerin
Robert Hansard
Emery Huse
Lloyd A. Jones
Wilson Leahy
Sidney Lund
Dr. C. E. K. Mees
Lewis L. Mellor
Garland C. Misener
Peter Mole
Hollis Moyse
J. K. Nunan
Dr. Konstantin Pestrecov
H. W. Remerscheid
Elmer C. Richardson
Park J. Ries
Robert Riley
Loren Ryder
Dr. V. B. Sease
Peter L. Shamray
Sidney P. Solow
Dr. James S. Watson, Jr.
James R. Wilkinson
E. A. Williford
Wallace V. Wolfe

NON-RESIDENT MEMBERS

Charles E. Bell—St. Paul, Minnesota
Georges Benoit—France
O. H. Borradaile—England
Jack Cardiff—England
S. C. Chuck—China
Olle Comstedt—Sweden
J. Burgi Contner—New York, N. Y.
John Dored—Europe
Max B. DuPont—Tahiti
Higino J. Fallorina—Quezon City, P. I.
Frank R. Follette—Sparta, New Jersey
Charles Harten—New York, N. Y.
Reed N. Haythorne—Tucson, Arizona
Charles W. Herbert—Tucson, Arizona
John L. Herrman—New Orleans, La.
Eric Horvitch—South Africa
Wm. H. Jansen—Manila, P. I.
Don Malkames—Tuckahoe, N. Y.
Louis Page—France
Ted Pahle—Spain
Paul Perry—California
Alex Phillips—Mexico
Bob Roberts—Argentina
Robert Sable—Chicago, Ill.
James Seeley—Philadelphia, Pa.
William Steiner, Jr.—Cliffside Park, N. J.
Prasart Sukhum—Thailand
Nicholas Toporkoff—France
Frederick A. Young—England
Frank C. Zucker—New York, N. Y.

INACTIVE MEMBERS

Faxon Dean
Jos. A. Dubray
Harry Hallenberger
G. Floyd Jackman
Douglas Shearer

HONORARY MEMBERS

E. O. Blackburn
A. S. Howell
David MacDonald
G. A. Mitchell

NEWSREELER'S DILEMMA

(Continued from Page 201)

were now in ruins was depressing to me but not too great a handicap. Ruins can sometimes be colorful and are always dramatic. But my actors were gone. Gone was the incredulous Goering, the pompous Mussolini, the sinister Hitler, the strutting Ciano, the gentlemanly Horthy, the oily Beck, vain Carol and all the others. Some had died a natural death, some had been shot, hanged or exiled—gone were they all from the European scene and my camera viewfinder.

Their places had been taken by a bleak row of insignificant and often temporary personalities, among whom foreign minister Bevin is perhaps the most spectacular. I don't intend to discuss what the world has gained or lost by these changes, but I want to stress that for me, as a newsreel cameraman, it has posed a difficult problem.

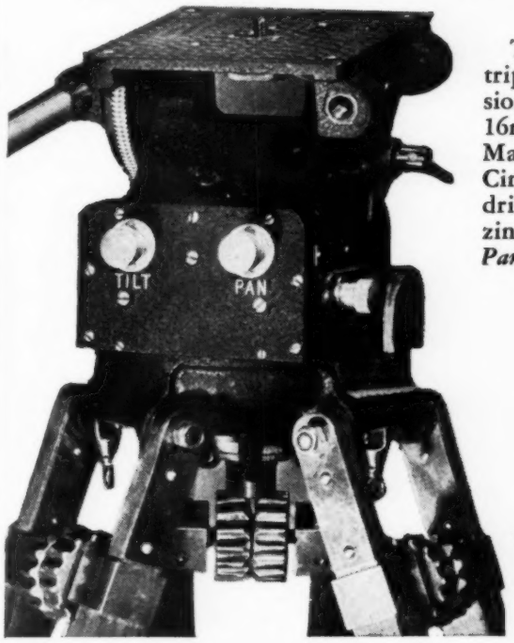
Added to this setback in performance personnel is the iron curtain which Stalin has drawn across the European stage, cutting postwar newsreel coverage possibilities to half that of prewar. Because all open news work is forbidden behind the iron curtain, I have no chance to cover the Baltic States, Poland, Czechoslovakia, Hungary, Bulgaria, Roumania or Albania. Once, very long ago, when Lenin died in 1924, I filmed that funeral story in Moscow in spite of strong Soviet restrictions. I even managed to get the film out of the country, which resulted in my arrest by Soviet secret police. After six weeks in prison and endless cross-questioning, I was sentenced to death. Diplomatic pressure was brought to bear and this sentence was reduced to a decree of "eternal expulsion from the Soviet territories." So with this experience behind me, I can readily say there is no newsreel story in Eastern Europe that would make it worthwhile for me to cross into Russian territory with my camera.

Perhaps the most urgent problem facing the foreign newsreel cameraman since the war is what I may term the problem of "the plot." Like every Hollywood production, every newsreel story must have a plot, too. Before the war, the world was full of angles for news plots. There were a number of power centers dispersed around the globe, each with its own ideologic, economic, cultural and military interests. With the fantastic, highly explosive war plot still fresh in the peoples' memory, postwar events seem tame by comparison.

Only one story has created a really worldwide sensation during the past three years and that is the story of the Berlin Airlift. That Russia tried to starve two and a half million people into submission

"PROFESSIONAL JUNIOR"
SMALL GYRO TRIPOD

It is no longer necessary to use a large, heavy tripod for your 16mm. professional and semi-professional cameras



This new, small size GYRO tripod handles all 16mm. professional type cameras: Mitchell 16mm; Auricon single system; Maurer 16mm.; motor-driven Cine Special; also 35mm. motor-driven Eyemo with 400′ magazine. It features *Super Smooth Pan & Tilt Action.*

Positive pan-locking knob. Tilt locking lever. Quick wrist action locking knob for leg height adjustments. Pan handle can be inserted at 3 different positions on tripod head for operator's convenience or extreme tilt work. Legs are hard maple specially treated and warp resistant. Tripod head is Dow Metal magnesium and aluminum. Built-in spirit level. Swivel tie-down rings. Platform can be equipped for either ⅜ or ¼ in. camera screw.

Write for further details.

FRANK C. ZUCKER
CAMERA EQUIPMENT CO.
1600 BROADWAY NEW YORK CITY

16MM SPECIALIZED SERVICES 35MM

COLOR • B & W • BLOW-UPS • REDUCTIONS • SPECIAL EFFECTS
CINEMATOGRAPHY • RECORDING • TV FILM PRODUCTION SERVICE

BEAUTIFUL 3-COLOR 35mm THEATER PRINTS FROM YOUR 16mm COLOR ORIGINALS!

- PRECISION OPTICAL PRINTING . Dissolves, Wipes, Fades, Zooms, Montages, Action Speed-changes, etc.
- 16mm Color Balanced Printing Masters With All Special Effects Included
- 35mm Work Prints from 16mm Originals, for Faster and More Accurate Editing
- Scene Doctoring and Quality Alteration
- Matte-painting Composites, Titles and Inserts
- Background Projection and Trick Photography
- Television Air-checks for Reference Purposes
- Research and Experimental Work

Experienced Major Studio Technicians — The Best in Precision Equipment — Modern Sound Stage

FILMEFFECTS of Hollywood
1153 N. Highland Ave.
Hollywood 38, Calif.
HOllywood 9-5808

Cine Kinks for Movie Amateurs

SPLIT A GALLON LUBRICATING oil can in half, lengthwise, for an emergency reflector for photoflood lamps. Attach the lamp socket to bottom of can with small bolts. Solder a large picture frame hook to top of can or attach a spring clothes pin here with screws as means for clamp-inf reflector to a stand, chair or other convenient fixture.

•

USE A FRESHLY LAUNDERED flour sack for holding your unedited film strips. Fit opening of sack with a wire frame and attach to your editing table by means of short wooden batten. Use numbered spring clothespins around edge of frame to hold the lead ends of each film strip.

•

IF RANGE OF TILTING DEVICE ON your home movie projector is limited, a handy gadget that supplies additional height may be made from a block of wood, roughly 2″ by 4″ by 6″, with three steps cut in the top surface, affording three additional levels for your projector.

•

ODD SIZE FILTERS, providing they are larger in diameter than the camera lens, can be used in an emergency by mounting them in front of lens with scotch tape.

•

A LARGE BOTTLE OR GALLON jug makes an excellent developing drum for short lengths of film. Wind film around bottle and secure ends with scotch tape. Ideal for developing short title strips or tinting or toning.

•

WHEN YOUR PROJECTOR pilot light burns out, tie a small pen-size flashlight to a spring clothespin and clamp it to projector.

•

CUTTING PORTHOLES in living room walls enable you to set up projector in another room, thereby eliminating the projector noise and giving your films professional presentation. To conceal these portholes, when not showing movies, mount a framed picture over them. Hinging picture frame to wall from the bottom and attaching a length of picture wire to top of frame, will enable you to raise and lower the picture at will from other side of the wall.

•

IF YOU LABEL YOUR FILMS by printing the title in ink on the white leader strip, you can make the lettering permanent by applying a coat of clear nail polish over it.

and that these people were saved by the gallantry and resourcefulness of British and American airmen, made news of magnitude equalling that of many wartime events. But as such news is invariably shortlived and because by now the airlift has become a routine and almost commonplace operation, it will only become news again when and if the blockade is lifted. (Mr. Dored Wrote this prior to the recent dubious lifting of the blockade—ED.)

Out of the titanic struggle of this last war, two giants emerged: America and Soviet Russia—overshadowing all other powers. As long as the Russia giant defies truth and therefore bans open news work, we newsreel photographers must content ourselves with "western" news. But in so doing, it seems to me that all our newsreels have ventured farther and farther away from *news* and now manily consist of what I would term *entertainment*: sports, fashions, beauty contests, etc. Only occasionally does a newsreel today contain a real news item, of which a very small percentage is foreign. In a way I think our newsreels have remained isolationists while our country's general policy has changed to embrace more than half of the world.

Behind this phenomenon may be the always questionable economy of the newsreels. Perhaps, also, they are influenced by the competition between newsreels and the growth of television. As a very seasoned newsreel cameraman, I have been through quite a number of "economy drives" in my time, and when I consider how news expenses have been reduced since the early days—as when I would charter a plane to fly a parcel of news film half way around the world to beat a competitor newsreel—and compare conditions with today where I must carefully compose a cable to keep the wordage down, I still am not convinced that economy needs can be the reason for the trend of the newsreel today. As to television, I know still less about it than I know of economy. Therefore newsreel managers, editors and treasurers will probably smile at my naive proposal that we leave race events, sports matches and all the other purely entertainment events to television and let us concentrate on recording *news* which no other agency is as well equipped by experience and organization to do.

I do not underrate the difficulties confronting us, which I have partly described from a cameraman's point of view already. But as the sensations of war and victory recede, I think news will come out of its "slump" and will again be evaluated for its own merits. I also believe that as Europe recovers and the Atlantic brotherhood gets going, new plot centers will develop within the borders of America and Russia. With the American policy now embracing all the free world, does not the interest of Americans also turn towards contemporary world news and history?

Or am I just an old news-hound whose hunting instincts make me blind and deaf to the strange trends of this postwar era?

HOW ZOOMAR AIDS TV PHOTOGRAPHY

(Continued from Page 202)

time we switched all our studio cameras over to R. C. A. Image-Orthicons, we were doing this show with two Iconoscopes. We put two Image-Orthicons on the "Kukla, Fran and Ollie" show and added more gray hairs to the present ones, in trying to find two tubes that were properly matched."

This is where the Zoomar saved the day, he said. Using the two Image-Orthicons gave them the result of different looking characters every time they switched from one camera to another. Birch suggested using the Zoomar and doing the entire show with one camera and the Zoomar lens. The second camera could then be used on the commercials. His suggestion was followed and the result is that the puppets and Fran are always of the same image quality throughout the show. The show no longer suffers from the image differences that followed when cuts were made between two cameras.

"We also found our zoom shots much improved," continued Birch, "enabling us to do away with a dolly and a dolly pusher. We feel the show is 'tops' from a photographic and technical standpoint and that the Zoomar has added more interest to it."

Nor is the Zoomar's use confined to the "Kukla, Fran and Ollie" show at WBKB. According to Birch, the lens is used on baseball, football, parades and other remote telecasts. They have used it in the studio on their super-dramatic shows where, according to Birch, it has given results the studio could not obtain in any other way. "In fact," he said, "WBKB was the first television studio to use the Zoomar on a dramatic show."

As the use of this radically new lens is learned by and through experience, it is certain to become one of the most important accessories for the television camera. Today it is being used by more than 25 TV stations for studio productions and remotes.

CUTTING THE COMMERCIAL FILM

(Continued from Page 208)

wheel can be cut to dissolve to a close-up of a whirling fly-wheel on a modern machine, thus providing a quick and smooth transition from old to new industry.

The actual physical routine of cutting is familiar to everyone whose job it is to edit commercial features. For the benefit of those who are just entering this phase of the field, we shall review briefly the various steps of creative cutting.

First, the raw footage is screened and the best take of each scene is selected and noted on a scene list. Secondly, these good takes are culled out and assembled in sequence, preferably on a film rack or pigeon-hole board. The extra takes on each scene are very carefully catalogued as to subject matter and filed away in cans to form a stock library for use in future productions.

Next, the "slates" are cut off of the scenes in the first sequence (one by one) and they are assembled by splicing in the order indicated in the script. None of the action is cut off any of the scenes at this point; therefore, there will be quite a bit of overlapping action in the various angles of the same sequence. The footage is then run on a projector (we assume work-print is being used) and the editor views the sequence several times until he can "feel" the flow of the action and select the spots in the overlapping action where cuts can be made most smoothly.

The editor then runs the sequence through a viewer, marking with grease pencil the frames where he feels cuts can be made to best advantage. Using these marked frames as his guide, he then cuts out the excess overlap footage and splices the scenes together in a rough cut of the sequence. It is best to cut the footage too long than too short at this particular stage.

Once again the rough cut sequence is projected and closely checked for smoothness and pace. The editor checks the narration for that particular sequence and, working with the writer, juggles picture and words so that the two directly complement each other. Sometimes there is a certain amount of information that must arbitrarily be included in the narration of a certain sequence and the picture must be padded to fit. The more satisfactory method to be used wherever possible, however, is for the picture to be cut so that it flows smoothly, and then tailor the narration to match.

When the editor and the director are satisfied with the cutting of the first sequence, it is set aside and the second sequence is tackled. So on down to the final sequence. It is by far the best technique to cut a picture one sequence

✔ Rugged vibrator unit. Will withstand overloads without harm. No strings to break.
✔ High Fidelity frequency response.
✔ Requires only 300 milliwatts for full modulation.
✔ Can be biased for noise reduction.
✔ Compact and light weight.
✔ Mounts in any position. V bed and locking gib permit track position adjustment.
✔ Proven performance.
✔ Prefocused exciter lamps. Can be changed in a few seconds. No adjustments required.
✔ Fine focus adjustment with one-sixteenth-inch range is built in.
✔ Available for 16mm or 35mm tracks.
✔ True square edge on Mounting Plate to check azimuth of optical image.
✔ Price $450.00
✔ Write for free Technical Brochure.

BERNDT-BACH, Inc., 7381 Beverly Blvd., Hollywood 36, Calif.

MANUFACTURERS OF SOUND-ON-FILM RECORDING EQUIPMENT SINCE 1931

TRANSMISSION "T" Stop Calibration

DESIGNING and MANUFACTURING of Specialized lens mountings and equipment for 16mm & 35mm cameras

Animation Equipment

MOTORS for Cine Special, Maurer and Bolex Cameras

LENS COATING

John Clemens — Erwin Harwood

NATIONAL CINE EQUIPMENT INC.

20 WEST 22nd ST., NEW YORK 10, N.Y.

RENTALS — SALES — SERVICE
Eyemo, Mitchell, Bell & Howell, Wall, Cine Special Cameras

Bausch & Lomb "Baltar" lenses and others for Motion Picture Cameras

EVERYTHING PHOTOGRAPHIC AND CINEMATIC

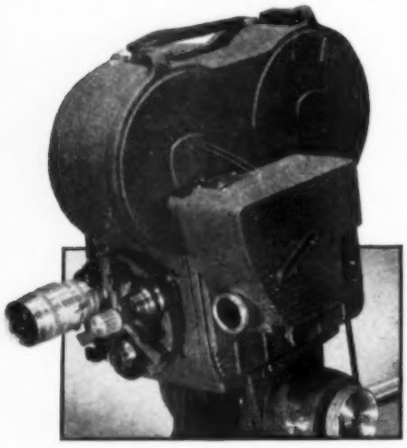
FOR PROFESSIONAL AND AMATEUR

The World's Largest Variety of Cameras and Projectors. Studio and Laboratory Equipment with Latest Improvements as Used in the Hollywood Studios. New and Used. BARGAINS.

HOLLYWOOD CAMERA EXCHANGE

1600 CAHUENGA BOULEVARD
HO-3651 • Hollywood, Calif • Cable Hocamex

We have often been asked...



why the Auricon-Pro is the *only* 16mm camera made, regardless of price, which operates so silently it can be used within 10 inches of any sound recording microphone. We have been asked how it is possible to build a 16mm professional camera with synchronous electric motor drive, lens mount made to .0001" accuracy, film pull-down mechanism of hardened steel for rock-steady pictures, geared Veeder-Root footage counter, stainless-steel ball-bearing film gate for dependable in-focus pictures, solid aluminum machined camera body, and still sell this Auricon-Pro at $644.50 for the "Double-System" Camera (silent) Model CM-71S!

The answer is found in precision production plus years of experience building 16mm equipment, and world-wide sales made possible by the low price. Auricon Owners and Dealers call it "The best camera value on the market today!"

SEND FOR YOUR FREE COPY OF THIS AURICON CATALOG

Auricon Hollywood

BERNDT-BACH, Inc.

7381 Beverly Blvd., Los Angeles 36, Calif.

MANUFACTURERS OF SOUND-ON-FILM RECORDING EQUIPMENT SINCE 1931

at a time, and preferably in order. Otherwise, if the editor attempts to cut the whole picture at once, he becomes swamped by it and is not able to pay attention to the little details that add up to precision cutting.

When all of the sequences are approved for cutting, they are spliced together in order and the entire picture is run for the editor, the director and the client's representatives. Some changes will undoubtedly have to be made when the picture is thus viewed as an entity, but such adjustments are usually minor if the individual sequences have been carefully edited.

When the cut work-print has been approved, the picture is ready for sound dubbing, and as soon as the sound track has been checked, the original color or black and white negative is matched to the cut work print and optical effects are set up preparatory to making the composite print.

The importance of creative cutting in the production of commercial pictures cannot be over-estimated, since it is the editing which accounts for the ultimate presentation to the audience of the efforts of the writer, the director, the cameraman, and (most important) the client.

CHAMPION

(Continued from Page 197)

the entire picture was rehearsed scene for scene on a vacant sound stage, with no props other than those necessary to complement the action. On hand, beside the cast, director, producer, script writer, the editor, grips, etc., was Frank Planer and his gaffer, Tom Ouellette. Together they planned the lighting of sets—planning which called for elimination of scaffolding where possible, the barest minimum of lighting equipment, but with a reserve of lighting units to cover any emergency.

Planer, using his detached camera viewfinder, planned his camera angles and setups, always in consultation with director Mark Robson, of course. "Thus, when I was ready to shoot the picture," Planer said, "I had a very real conception of the complete production. I had the lighting and the photography fully planned for every scene in advance. The delays and the lost motion that often follow where the cameraman must take each scene as he comes to it, was thus avoided. The production was placed on a strict timetable basis, and once the camera started to roll, shooting proceeded according to schedule."

Contributing much to the smooth running of the production, according to Planer, was the fact that the advance planning, conferences, and rehearsal of the picture had given everyone concerned a complete visualization of the production. The final rehearsal action was the same as enacted in the actual shooting later. The lighting and camera angle which Planer had established weeks earlier, say, for scene 232, dovetailed with the action and script instructions when the time came to shoot the scene. Only in very rare instances were any last minute changes made in the script. Earlier, as problems were encountered—and every opportunity was given for them to be recognized and dealt with during the numerous rehearsals—they were settled then and there, and the script changed accordingly and followed to the letter when shooting began.

The terrific impact of "Champion's" story demanded a mood which was established early in the picture by Planer's well calculated lighting and camera angles. From the very beginning, Planer built steadily for the climax—the big fight sequence. "I had decided that, above all else, I would put everything I had into the final sequence, which is the climactic point of the story," he said. The grim aspects of the story which prevail throughout much of the picture called for appropriate lighting to sustain mood, and Planer met it successfully with a fine degree of low-key lighting, first in the opening scenes of the two men scuffling with the hoodlums in the box car, then the hunt by one for the other in the darkness after they have jumped from the train, and later in the interior of the training quarters, in the fight arena, and finally in the big championship bout scenes.

Planer accomplished mood lighting and at the same time saved considerable money for the producer by employing photoflood lamps in a great many scenes, thus eliminating the bulky, and more costly illumination of big arc lamps and inkys. Photofloods, replacing the usual light globes in the practical lamps dotting the ceiling of the corridors and the dressing rooms of the fight stadium, gave the right effect of natural lighting. Photofloods supplied overhead lighting for the fight arena. And interiors at the little roadside inn in Santa Monica were lit for the most part with photofloods.

In the early part of the story, much of the motivating action takes place within the roadside inn, where Douglas and Kennedy have found work—and Ruth Roman. Planer chose the location in preference to a studio-built set for several

reasons; first, it was completely natural; it afforded a view of the passing traffic through the windows which, to be reproduced on a studio set would have involved costly background plates. It also posed a problem in camera movement, for the little "two-by-four" eatery would not permit use of either tripod or small dolly. Planer made many of the shots with camera mounted on a stack of pop bottle cases; on the counter, or on a chair.

Planer encountered trouble, too, in the light coming through the windows directly facing the camera. When first they scouted the location, it was a mild sunny day. But on the day they chose to shoot at this location, a brush fire sprung up suddenly in the hills back of the inn, flooding the sky with billowing white smoke. This increased the brilliance of the light coming through the windows, a problem which Planer met by placing blue cellophane over the window panes. But even this expedient was not without contributing problems. The heat of the sun caused the cellophane to shrink and curl, and the wind rustled the cellophane, causing highlights to flash back toward the camera lens. Had Planer the time, had he not a rigid timetable to follow, he would have met the problem by replacing the clear glass in the windows with blue. Instead, fiine piano wire was stretched across each window pane to keep the cellophane flat.

The moonlit beach scenes are a tribute to Planer's camera artistry. Shooting these scenes in daylight, he used a combination of filters, which he developed himself, to achieve the excellent moonlight illusion. Only the closeups of Douglas and the girl on the beach were shot on the sound stage, and only because dialogue requirements made the exterior location impractical. But so carefully are these lit and filtered that they match the heavily filtered exterior long shots perfectly.

Planer's camera takes a virile and startlingly realistic turn in the fight scenes, which are supposedly staged in a number of big fight stadiums throughout the country. Actually they were all shot in the same stadium. Planer changed the visual aspect each time, as the story locale required, by altering his lighting, by painting the ropes and posts white for one sequence, and darker for another; or by shooting one sequence from a higher or lower camera angle.

The picture is remarkable for the excellent spectator viewpoint of the fight scenes, lending further to the naturalness of the action and contributing to the mood of the story which Planer early decided was one of the most important factors in building the picture to its smashing climax. Planer's Mitchell camera was mounted on a special "Rosie" dolly which permitted it to be used close to the floor. It permitted sliding the cam-

C. ROSS

FOR

LIGHTING EQUIPMENT

Inkie and Arc Lamps including Required Accessories
Generators—Cables—Boards—Boxes

•

Raby Camera Crane—Dollies—Blimps—Geared Heads

•

GRIP EQUIPMENT

FOR LOCATION AND STUDIO

Parallels—Steps—Platform Ladders
Century Stands—Reflectors—Flags—Scrims

•

SOLE EASTERN MOLE-RICHARDSON CO. DISTRIBUTOR

RENTALS • SALES • SERVICE

•

CHARLES ROSS, Inc.

333 WEST 52nd STREET

NEW YORK 19, N.Y. Circle 6-5470-1

NO GENERATOR NECESSARY

. . . when you use the new compact, carryable COLORTRAN light kits. Ideal for television and 16mm. film production. Major studios now use them, too!

Call For Demonstration Or Write For Details

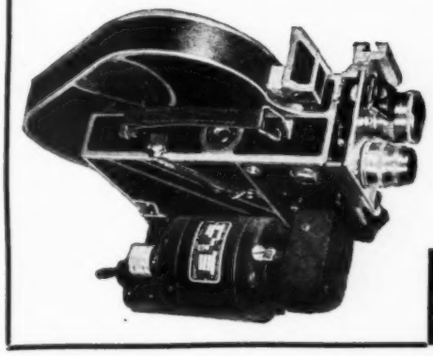
ColorTran Converter Company

7333 Santa Monica Blvd., Hollywood 46, Calif. Phone: GRanite 4461

SYNCHRONOUS MOTOR DRIVE

for the

E. K. Cine Special



110 Volt A. C., Single Phase, 60 Cycle

This motor will run in synchronization with either 16mm. or 35mm. sound recorders. It is provided with mounting platform which permits removal of magazine while camera remains mounted on motor.

Drive coupling attaches to single-frame shaft of camera and is mated to spring-steel drive arm of motor gear box. This assures that camera mechanism cannot be damaged if a film jam occurs as the spring steel arm drive will shear. This is easily replaced.

A knurled knob on motor armature permits rotating for threading. "On-Off" switch built into base. Platform base threaded for 1/4" and 3/8" camera tie-down screws. Rubber covered cable with plugs included.

Price $150 . . . Immediate Delivery

FRANK C. ZUCKER

CAMERA EQUIPMENT CO.

1600 BROADWAY NEW YORK CITY

U. S. Pat. No. 2260368

GOERZ AMERICAN

APOGOR

F:2.3

the movie lens with microscopic definition successful cameramen have been waiting for—

A new six element high quality lens for the 16 and 35mm. film camera. Corrected for all aberration at full opening, giving highest definition in black-&-white and color. Made by skilled technicians with many years of optical training.

Fitted to precision focusing mount which moves the lens smoothly without rotating elements or shifting image.

This lens comes in C mount for 16mm. cameras. Fitting to other cameras upon special order.

Sizes available now: 35 and 50mm. uncoated and 75mm. coated.

Write for prices, giving your dealer's name.

The C. P. GOERZ AMERICAN

OPTICAL COMPANY

OFFICE AND FACTORY

317 EAST 34 ST., NEW YORK 16, N. Y.

AC-6

The ONE-STOP STORE for

FILM PRODUCTION EQUIPMENT

Since 1926 S.O.S. has supplied leading film producers with Studio, Cutting Room and Lab equipment. Complete Assortment in Stock—Cameras, Lenses, Booms, Blimps, Dollies, Moviolas, Recorders, Printers, T.V. Background Projectors, Porcessors, etc. — UNDER ONE ROOF.

Special Values For This Month!

2000W Fresnel spots with heavy yoke	**$ 57.50**
Neumade 16/35MM automatic film cleaner	**194.50**
B&H automatic 16/35MM hot splicer	**795.00**
35MM Cinephone Recorder	**495.00**
B&H Eyemo Q with lens	**895.00**
MH Viewfinders (plus tax)	**135.00**
New Auricon Pro Silent Camera	**644.50**
Bardwell Quadlites on stands	**29.50**
New Auricon 16MM Sound Recorders	**664.50**
New Micro 16MM Sound Readers	**147.50**
Arri 16MM Step Printer	**97.50**

NOW READY! Catalog "Sturelab" — listing over a thousand **"BEST BUYS"** in **new and rebuilt** apparatus, is ready. Well-named "The Bible of the Industry," it's worth having. Write for your **FREE** copy — edition is limited.

S. O. S. Cinema Supply Corp.

Dept. F, 602 W. 52nd St., New York 19

era over the canvas of the ring to follow the fighters, and back again, to pan from side to side, as required—with the same smoothness and percision had camera been mounted on the conventional studio dolly or tripod.

Meanwhile, Perry Finnerman, Planer's second cameraman, "covered" him with a special Cunningham - Eyemo combat camera. Perched on a baggage-handler's two-wheel hand truck, Finnerman was wheeled around the ring as he trained his camera on the battered leatherpushers slugging away at each other in a mythical prizefight that had all the earmarks of the real thing. Indeed, in many instances it was real. Douglas and each of his opponents had agreed, for the sake of realism, to really fight instead of resorting to the usual leather tossing that passes for boxing in so many fight pictures. Douglas went into rigid training before the fight sequences were filmed and received professional coaching from veteran ring champ, Ace Hudkins. And when the picture was finished, Douglas knew how it really feels to be a prizefighter.

This same sincerity of purpose marked Frank Planer's work in the production, too. After he had read the script, Planer agreed to direct the photography if he could also have a hand in planning the production, which, happily, coincided with producer Kramer's wishes. Good pictures do not come the way of cameramen very often—pictures with Academy Award winning possibilities—but when one does come along, a picture that offers real opportunity to enhance and motivate the story through intelligent lighting and camera work, it poses the sort of challenge every cameraman is eager to accept.

"Champion" is—or was at the beginning—a picture without star names. To put it across, it was necessary to give it production values and real "socko" that would enable it to sell on merit alone. And that is exactly what happened. As sincere as Kirk Douglas' punching is Frank Planer's calculated mood photography; Mark Robson's smart direction and the frank portrayal's of every member of the cast. Planer may well rest on his laurels, while enjoying his European sabbatical, and contemplate the heights to which his stock may rise as a result of his excellent photography of this picture.

PUSHBUTTON CINEMATOGRAPHY

(Continued from Page 205)

the exposed film. This exposure is controlled by a mechanical shutter.

The camera and shutter are driven by synchronous motors which are synchronized with the entire television system. The shutter drive is isolated from the main camera, and a 3600 - rpm synchronous motor drives the shutter at the necessary 1440 revolutions per minute through a set of precision gears. Another motor, synchronized with this, drives the film transport and intermittent mechanism. This arrangement insures rotational accuracy and freedom from inter-action of the camera drive and shutter drive mechanisms.

The density of film recording depends not only on the length of exposure but on the brightness of the cathode-ray picture tube. Since the exposure time is fixed, the highlight brightness of the picture is varied by means of the video gain control; the kinescope bias control will set the black level or point of visual extinction of the return lines. The beam current of the picture tube is measured by a microammeter on the control panel of the monitor; since there is a direct relationship between this current and the output of the tube, the measurement of the beam current provides a good index to the brightness of the picture.

Normally, the positive kinescope images are filmed on standard stock, producing negative film images which can be used for rebroadcast by reversing the video phase in the TV camera. The negative is then available to produce as many positive prints as desired. For applications where quick processing and projection is required, such as in theatres, a polarity switch makes it possible to adjust the kinescope to produce negative images. Such images can be photographed and processed as direct film positives for immediate projection. RCA has found that with special processing equipment, it is possible to project the finished pictures on the motion picture screen within 40 seconds after they are filmed. Using this technique, theatres could take pictures "off the air," rush them through processing, and use standard film projectors to show them on the screen as newsreels.

The 16mm. film has been chosen initially for television recording because of the importance of costs of film stock and film processing, together with the safety problems involved. RCA engineers have found that 16mm. fine grain films with suitable processing can produce excellent picture quality, and since the costs involved are only about one-third as much as in the case of 35mm. film, the use of 16mm. film is felt well justified. When it is realized that it takes 1200 feet of film to record a half-hour performance, cost of film and developing is recognized

as an important factor.

The motion picture camera can be equipped with RCA sound recording equipment to place the sound track and picture on the same film, or the sound signals may be fed to a separate sound recorder which permits editing, re-recording, and dubbing.

MAGNETIC SOUND

(Continued from Page 206)

movie amateurs had attempted to satisfy their desire for sound through use of sound on discs and record playing turntables.

The culmination of the Foundation's efforts to perfect a method of application of magnetic sound to 8mm. movies is told by Dr. H. A. Leedy, Director, Armour Research Foundation, in an article in a recent issue of the Foundation's publication *Frontier,* part of which is reprinted here:

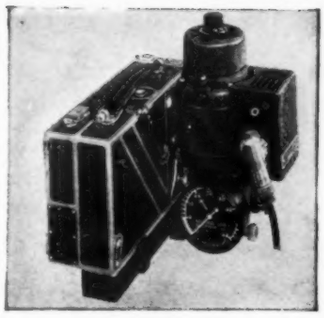
"The possibility of recording sound directly on 8mm. motion picture film has always been intriguing to motion picture engineers and to others interested in the field of sound recording. Attempts in the past to record sound on 8mm. film have proved unsatisfactory primarily because of the small space available for the sound track and because of the very low film speed—approximately 2.7 in. per second.

"The development and improvement of recording heads and magnetic powder has made possible for the first time the satisfactory recording of sound on 8mm. film. In 35mm. sound film the optical track is 0.100 in. wide and is well removed from the sprocket holes and edge of the film. This is, of course, necessary for optical recording since uneven development in the neighborhood of the sprocket holes and the edge of the film results in a distortion of the optical track.

"A magnetic track can be used instead of the optical track on 35mm. film. With improved magnetic powders, it is possible to obtain high-quality magnetic records on 35mm. film. Recent experiments have shown that at 24 frames per second it is easily possible to obtain a reproduced signal having a signal-to-noise ratio in excess of 45 db and a frequency response which is flat within plus or minus from 50 to 16,000 cycles per second.

"For 16mm. sound film the sprocket holes have been removed from one edge of the film to make space for the optical track. This optical track can be replaced by a magnetic track, or, on 16mm. silent film, the magnetic track can be placed between the sprocket holes and the edge of the film. In either case, at the same film speed, the results are equally satisfactory.

"For 8mm. silent film, the sprocket



VARIABLE SPEED MOTOR
with TACHOMETER
for
CINE SPECIAL CAMERA
AND MAURER CAMERA

- 115 V. Universal Motor — AC-DC
- Variable Speed 8-50 Frames
- Separate Base for Cine Special
- Adapter for Maurer Camera

Interchangeable Motors:

12 Volt DC variable Speed 8-50 Frames.
115 Volt AC 60 Cycles, Synchronous Motor Single Phase.
220 Volt AC 60 Cycle, 3 Phase, Synchronous Motor.

Animation Motors for Cine Special. Maurer and Mitchell Cameras. Motors for Bolex and Filmo. Cameras. Time Lapse Equipment.

National Cine Equipment, Inc. 20 WEST 22nd St. NEW YORK 10, N. Y.

ART REEVES' NEW ADDRESS:
ART REEVES MOTION PICTURE EQUIPMENT AND CAMERA SUPPLY COMPANY
7512 Santa Monica Blvd., Hollywood 46, Calif.

Only Art Reeves Can Sell The New Model

SENSITESTER
Will Handle Modern Fine Grain Film.

hallen SYNCHRONOUS MAGNETIC RECORDERS
PLEASE SEND FOR BROCHURE
3503B WEST OLIVE AVENUE · BURBANK, CALIFORNIA

NOW AVAILABLE!

- 35mm. Variable Area Film Recording Equipment.
- 35mm. Re-recorders.
- Interlock Systems.
- Studio Mixer Consoles.
- Portable Converters.
- 35mm. Double Film Magazines and Loop Attachments.

QUALITY FILM RECORDING EQUIPMENT SINCE 1930

BLUE SEAL SOUND DEVICES
536 E. 85th St., New York 28, N.Y.
Cable Address: **SOUNDFILM**

AKELEY CAMERA, Inc.
175 Varick Street
New York 14, New York
—Established 1914—

Designers and manufacturers of silent and sound motion picture cameras with 225° shutter opening, (288° shutter opening for television use), gyro tripods and precision instruments.

Complete engineering and machine shop facilities for experimental work, model and production runs.

Inquiries Invited

DIRECT 16MM SOUND
with **MAURER RECORDING SYSTEM**

For the Producer of 16mm. Business, Educational and Religious Films.

- Edge Numbered Work Prints
- Sound Recording
- Duplicate Negatives
- Synchronized Studio Photography
- Release Prints—Color and B&W

GEO. W. COLBURN LABORATORY, Inc.
164 N. Wacker Dr., Dept. A . Chicago 6, Ill.

MOVIE AND SLIDE TITLES
STILL AT SAME LOW PRICES!
Same titles formerly distributed by Bell & Howell —now sold direct. Large variety backgrounds available. No charge for tinting film Amber!
WRITE FOR . . .
free illustrated literature and samples
TITLE-CRAFT, 1024 Argyle St., Chicago 40, Ill.

UHLER CUSTOM BUILT Cine MACHINERY
MOTION PICTURE PRINTERS 16MM 8MM
CONTINUOUS-STEP-REDUCTION
SEND FOR DESCRIPTIVE LITERATURE
UHLER *Cine Machine Co.*
16519 WASHBURN AVE. DETROIT 21, MICH

holes already have been removed from one side of the film. If an optical sound track is to be used on this film it can be placed either on the unsprocketed side reducing the limited area available for the picture or it can be placed between the sprocket holes and the edge of the film, in which case troubles are encountered due to uneven development.

"Thus, neither of these locations is satisfactory for an optical track. However, a magnetic track 0.030 inches wide, can be placed on the sprocketed side. Very satisfactory results for the recording of speech have been obtained with a track in this position.

"Fig. 3 shows a typical block diagram of an 8mm. magnetic sound projector circuit. With the four-gang switch in the record position, as shown in the diagram, the high frequency oscillator current is applied to the erase head, thereby removing any signal which has been previously recorded on the magnetic track. The output from the microphone, after being amplified and equalized, is applied to the record-play head along with the high frequency bias current. With the four-gang switch in the play position, the high frequency oscillator is removed from the circuit, and the output from the record-play head is sent through the amplifier and equalizer to the loudspeaker.

"Several 8mm. silent projectors have been converted for use with magnetic tracks. More recently, a silent 8mm. projector has been converted and built into a complete unit for both recording and playback. Fig. 1 shows a side view of this projector. A contact type governor has been added to the series motor of this projector giving essentially a constant speed drive at 18 frames per second —2.7 inches per second. This projector is mounted on a base containing the erase-record-play head, an oil-damped fly wheel, the bias and erase oscillator and the audio amplifier.

"The film path, Fig 1, is from the supply wheel over the first drive sprocket, through the film gate, thence, after a long loop, through the erase-record-play head, over the fly wheel roller, under an idler pulley (which is pressed against the fly wheel roller by the tension in the film), and finally over the second sprocket to the take-up reel A back view of this projector is shown in Fig 2. the overall frequency response of this projector is flat within plus or minus 5 db for 120 to 3,500 cycles per second. If desired, an improved low-frequency response can easily be obtained by increasing the bass equalization

"With such a projector, recording can be made easily by the average amateur and can be played back immediately without the necessity of any intermediate processing. If the recording is unsatisfactory, it can readily be erased and a new recording made immediately. The recordings thus made may be played over and over again without appreciable loss of fidelity. It is possible to place magnetic tracks on existing 8mm. films; thus sound titles can be added to present 8mm. film libraries.

"It should be pointed out that it is extremely difficult to obtain uniform film motion at this low film speed of 2.7 inches per second. It is particularly difficult to obtain this by converting existing silent equipment. Much more satisfactory results could, of course, be obtained by designing an entirely new projector having uniform film speed in mind from the beginning. Such projectors, having satisfactory film speed control, would, of course, be suitable for recording music for amateur use. However, with the projector shown, very satisfactory recordings of speech have been made, and such a unit should prove a boon to the amateur who is interested in placing sound titles and other speech sounds on 8mm. film."

THE FOUNTAINHEAD

(Continued from Page 201)

employed them to complete advantage, without at any time going overboard for "arty" effects. But he went beyond the tailor-made dimensions of the interior sets in carrying the modern style of composition over into even the outdoor natural locales. For example, a huge rock quarry serves as one of the important settings for the action. Had this location been photographed in a conventional manner it would have been just another rock quarry. But to the lens of cinematographer Burks it became a ruggedly modern, almost stylized, mounting for dramatic action. The angular jutting shelves of rock were used as cubistic art forms to frame and balance the composition of the scenes. On paper, this sort of symbolism may sound cryptic and a bit farfetched—but on the screen the visual parallels are most forceful and direct.

In designing the sets for "The Fountainhead," art director Carrere was guided by the author's own descriptions of buildings and planned structures, some of which were described in the novel as "a mass of planes." He used cantilever design for some of the buildings, and produced some sharply moderne, almost futuristic, designs—most of which, he maintains, are practical enough to actually be put into use.

Over 300 architectural drawings were prepared for the film, and most of them followed the ultra-modern style for which the hero fought. Of the 70 separate sets

in the picture, 36 were interiors and 34 were exteriors. The modern settings included the architect's office, his penthouse apartment, the office of the newspaper publisher, and the living room of his "dreamhouse" in the country. All of these settings are characterized by bold but simple lines, plus the use of structural materials of varying textures.

The most spectacular outdoor set is, of course, the stone quarry. Located at Knowles, California, 55 miles from Fresno, it is the largest quarry in California and has been in operation since 1882. It furnished the granite for the City Hall and Hall of Justice in Los Angeles, as well as for many public buildings in other large western cities. The company spent three days shooting on location there, working in temperatures ranging up to 126 degrees.

Models of each set were built in advance and studied by the director of photography in order that he might plan his lighting and camera set-ups far in advance of construction of the actual sets.

To give the sets the desired "plane-against-plane" effect, Carrere had them painted lighter in the foreground than at the back and then flooded them with a great amount of light to provide sharp shadow lines. To further intensify the light and shadow effect, he painted the shadow areas of the set very dark and the high-light areas very light.

Carrere and Burks followed through with this black and white effect in the quarry sequence, also. Here the painters again went to work darkening the shadows for more forceful contrast. The touch of paint gave modeling and depth to the monolithic formations, lending them added force as compositional forms. The one technical nuisance was that caused by the sun moving across the horizon. As the sun moved, the painted shadows had to be washed off and repainted to match the new natural shadow patterns.

"The Fountainhead" owes much of its visual scope to the special effects created by William McGann and his staff. Miniatures, process plates and matte shots are smoothly executed and succeed in producing illusions that are especially realistic. Unusually effective is the collection of trick shots used in final sequence which shows the Wynand Building, "largest structure in the world," under construction.

The process by which the heroine is apparently taken to the top of the 1,400 foot unfinished building to visit her architect husband, required weeks of preparation and involved a nightmare of special effects. Riding to the top on a service elevator, she eventually reaches the point where she is looking down on the Empire State Building. Glancing up she sees the remainder of the building she is ascending, and to make this effect believable, it was

(Continued on Page 225)

The MART MESSAGE

The Camart Microphone Boom
With 12½ Ft. Extension Arm, Rotating Mike, Portable, Collapsible
Price $261.85

MICRO EDITING SPECIALS

16MM Electro Splicer	$ 97.50
16MM Motor Viewer	165.00
16MM Reader and Amplifier	147.50
Double or Single Inspector	45.00
Twin 16MM Synchronizer	110.00
Twin 35MM Synchronizer	110.00
Four Way 16MM Synchronizer	150.00
Double 16MM and 35MM	180.00

New Sound 16MM Moviolas

CINE SPECIALS - FILMOS - AURICON
NEW AND USED SOUND CAMERAS
MAURER SILENT AND SOUND CAMERAS AND RECORDERS

WE BUY - RENT — Write For List

IF YOU GO ALONG WITH THE CHANGING TIMES THESE ARE FOR YOU!!
Major Film Companies and Photographic Illustrators are using the New
COLORTRAN LIGHTS
High Intensity - Color Corrected. Get approx. 16,000 Watts, 3200-3400 Kelvin from 40 Amp. Fuses. Eastern Distributors.

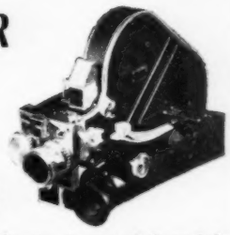
RECORDING
On Magnetic Film Tape 17½MM, 90 ft. per minute Syncronous.

HALLEN RECORDER
PORTABLE - HIGH FIDELITY
Tape film can be used over and over. Re-record on 16 or 35MM films.
LOWER PRODUCTION COSTS
Eastern Distributors
$1850.00

THE CAMERA • MART, INC.
70 WEST 45TH STREET
NEW YORK 19, N. Y.
WORLD-WIDE SERVICE
CABLE ADDRESS: CAMERAMART

***NEW*...16 mm. Moviola**
NOW—a professional Moviola for 16mm. production. Made by makers of the 35mm. Moviola. Runs at controlled speed, forward and reverse. Brilliant 2" x 2¾" picture on screen. Write for literature and prices.
MOVIOLA MANUFACTURING CO.
1451 Gordon St. Hollywood 28, Calif.

PROFESSIONAL VIEWFINDER FOR 16MM. CAMERAS



Shows large, erect image, corrected from left to right, on ground glass.
Shown above as used on the Cine Special. Model available for your camera, too. Professionalize your camera—improve your photography and composition. Write for details and price, stating make and model of camera used.
Attractive Discounts to Dealers
Maier-Hancock Corp.
12270 Montague St. Pacoima, Calif.

SALES • SERVICE • RENTALS
— 35 mm. • 16 mm. —
CAMERAS-MOVIOLAS-DOLLYS
Complete Line of Equipment for Production Available for Rental
Mitchell: Standard - Hi-Speed - NC - BNC - 16 mm.
Bell & Howell: Standard - Shiftover - Eyemos
Maurer: 16 mm. Cameras
Moviola: Editing Machines - Synchronizers
SPECIALISTS IN ALL TYPES OF CAMERA REPAIR WORK. LENSES MOUNTED
FRANK C. ZUCKER
CAMERA EQUIPMENT CO.
1600 BROADWAY NEW YORK CITY

25 YEARS AGO

With A.S.C. And Members

• ERNEST HALLER was shooting "Puppy Love" at the F.B.O. studios which site is now the present RKO-Radio studios on Gower Street

• GIL WARRENTON, having acquired a new Mitchell Camera, was engaged to shoot a new Universal production, "We Are French," under the direction of Rupert Julian.

• VICTOR MILNER and Fred Niblo were celebrating the completion of filming "The Red Lily," Niblo's latest production.

• JIMMY VAN TREES was photographing "Single Wives," an eight-reel First National Production starring Corrine Griffith and with George Archinbaud at the megaphone.

• AL GILKS was seeing Betty Compson daily through his camera viewfinder as he photographed this popular Paramount star in Sam Wood's production titled "The Female."

• ARTHUR EDESON signed with First National to photograph "The Lost World."

• FRED JACKMAN, who was now a successful director, and HOMER SCOTT were engaged by First National to produce important special effects photography for a forthcoming super-production.

• SOL POLITO, drawing upon his full range of glamour tricks, was photographing Priscilla Dean in "The Siren Of Seville" for Hunt Stromberg.

• BOB DORAN finished shooting Will Rogers' last production for Hal Roach and took over the photography of "The Spat Family" series of comedies for Roach.

• NORBERT BRODINE was receiving accolades for his splendid camera work in "The Sea Hawk."

• STEVE NORTON was filming a series of comedy dramas at Universal, under direction of Jack Dawn, which combined live action with clay models.

• CINEMATOGRAPHERS—they were called simply cameramen, then—were buzzing with excitement over the consolidation of three large film producing studios into one, namely, Metro-Goldwyn-Mayer.

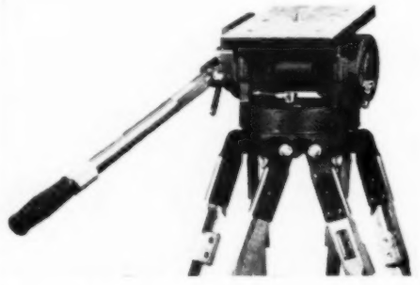
• JOHN ARNOLD completed filming "Free Love," the first production made under the new M-G-M merger. It had an all star cast and was directed by Hobart Henley.

WHAT'S NEW

in equipment, accessories, service

New 8mm. Cine Kodak

"Reliant" is name of Eastman Kodak's newest postwar 8mm. roll-loading motion picture camera. Features include sprocketless roll film loading, a pre-focused 13mm. f/2.7 Ektanon lens, and the popular Cine Kodak universal exposure guide. Other features include a full range of taking speeds from 16 to 48 frames per second for slow motion movies; an enclosed eye-level viewfinder equipped with indicators for parallax correction when taking close-ups, and likewise showing the field of acessory telephoto lenses. A locking exposure button and an accurate footage counter complete the equipment. Finish is silver-gray hammered metallic complementing the camera's functional styling. Price of camera is $89.00, including federal tax. Several accessories, including extra lenses are available.



New Tripod

Camera Equipment Company, New York, announces its new balanced "TV Tripod Head," said to meet the strict requirements for a pan-tilt head for television cameras. Head is designed on a new principle of pan and tilt action which discards friction and gyro principles. Tilt action is balanced to assist cameraman in the operation of his camera, reducing to a minimum the effort required to move the camera.

An important safety feature is incorporated in the Balanced "TV" Head, which relieves the operator from additional strain and eliminates the possibility of accidents. If, due to the neglect of the operator, the head is left unlocked with the camera mounted, it cannot fall forward or backward. The pan handle is adjustable for the operators' comfort, with no play betweeu the pan handle mounting bracket and the head. To adjust the position a simple locking lever is released, adjustment made, and lever repositioned. The pan handle is an adjustable telescoping type.

The weight and manufacture of the camera to be used must be known to achieve proper tension and accomplish floating action. A special "TV" size tripod base with reinforced shoes can be supplied for the head which can also be mounted on all standard professional type tripod bases, perambulators, pedestals, and dollies.

Photo Floodlight

General Electric Company's lamp department at Nela Park, Ohio has developed a small but extremely powerful photographic floodlight designed to provide the intense concentration of light necessary for high-speed motion picture photography. The new lamp, rated at 750 watts, throws a 75,000 footcandle beam of light.

Firm Name Changed

The American Bolex Co., Inc. has changed its name to Director Products Corporation and is now dealing exclusively in the manufacturing and marketing of the Norwood Director Exposure Meter, according to Robert E. Brockway, president.

All sales correspondence should be addresed to 2 West 46th Street, New York 19, N.Y., whereas all meters requiring service should be sent directly to the fac-

tory service department at Director Products Corporation, Stark Street Gate, Manchester, New Hampshire, Brockway said.

Lens Turret

J. Burgi Contner, A.S.C., 536 E. 85th St., New York, has designed a three-lens turret for the Auricon single system 16mm. sound camera. The turret will accommodate lenses mounted in standard 16mm. "C" mounts.

Turret is mounted on the main camera frame and insulated from the exterior housing. The adaptation of this turret to the Auricon is said to make the camera more adaptable to news work, where frequent quick change of lenses is necessary. Contner is a consultant to N.B.C.'s eastern television headquarters and to Jerry Fairbanks, Inc., on motion picture and television equipment.

New Cine Lenses

A new lens series, produced by Bausch & Lomb Optical Company, leading U. S. supplier of motion picture studio lenses, comes in both standard and telephoto models for 8mm. and 16mm. cameras.

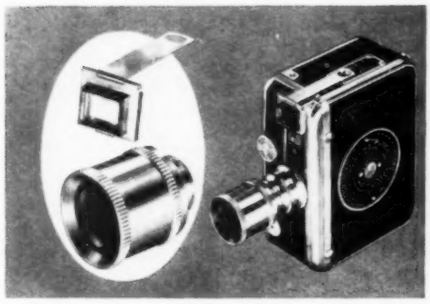
As a companion series to the optical firms' Baltar 35mm. lenses used by 20th Century-Fox, Paramount, Columbia, Universal, RKO, and other Hollywood studios, the new lenses were "designed especially for the home movie maker who demands professional results," according to Dr. Konstantin Pestrecov, chief photographic lens designer at Bausch & Lomb.

Known as Animars, each lens is fitted with a seasonal exposure guide plus click and spread diaphragm stops to assure correct exposure. The standard lenses are for photography under average light conditions, while the telephotos are for close-up shots of distant subjects, candid shots, and extreme close-ups of small subjects. A depth of field scale on the high speed and telephoto lenses enables the photographer to control the focus range on both foreground and background objects.

Seasonal exposure guides inscribed on the lens barrels help the amateur cameraman, and even those with no knowledge of photography, to obtain correct exposure in any kind of weather.

Barrels are marked with two seasons, Summer and Winter, and a corresponding scale of light conditions, Dull, Hazy, and Bright. When pictures are taken on a gloomy December day, for example, the photographer merely turns the scale so that the word "Dull" is aligned with "Winter," and correct exposure is assured.

Speeds for the five standard lenses range to f/1.9, and to f/3.5 in the four telephotos.



Wide Angle Attachments

DeJur-Amsco Corporation, Long Island City, New York, announces the addition of Wollensak wide-angle attachments for its camera line. These include a lens wide-angle attachment and a view finder attachment, available for both the single and turret cameras, using either the f/1.9 or f/2.5 (13mm. lens).

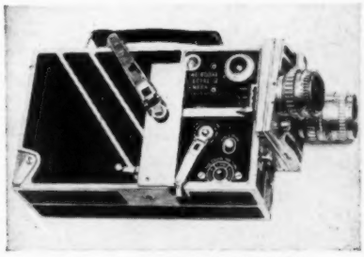
These attachments are recommended for shots taken in small, cramped quarters, such as interiors, and the like, which include more than the regular lens will cover. They double the field of view that the standard 13mm. lens gives, yet no compensation is necessary in lens speed or exposure. They are fully color-corrected.

Printer Price Reduced

The Oscar F. Carlson Company, Chicago, manufacturers of the Carlson Craft "Depue" Film Printing equipment has recently announced a substantial price reduction on their Optical Picture and Sound Track Reduction Printer, Continuous and Microfilm Printers.

The officials of the company stated that this price reduction was made possible because of improved engineering design, which lends itself to more efficient manufacturing procedures.

AUTOMATIC DISSOLVE
For The Cine Special



New Improved Model 'C'
New Price **$54.00** Plus Tax
See your dealer, or write
JOSEPH YOLO
5968 Santa Monica Blvd., Hollywood, Calif.

RUBY CAMERA EXCHANGE
Rents . . Sells . . Exchanges
•
Everything You Need for the
PRODUCTION & PROJECTION
of Motion Pictures Provided
by a Veteran Organization
of Specialists
35 mm. . . . . 16 mm.
Television
IN BUSINESS SINCE 1910
729 Seventh Ave., New York City
Cable Address: RUBYCAM

QUALITY
8 & 16 MM
REVERSAL
PROCESSING
Open SUNDAY & DAILY Noon 'til Nine or NITE!
EASTMAN BLUE BASE
AND DUPONT FILMS
Call CR 6-0328
Cine-Craft
8764 BEVERLY BOULEVARD
LOS ANGELES 36, CALIF.

BLACK AND WHITE • KODACHROME
ENLARGED 8 to 16
REDUCED 16 to 8
DUPLICATES
GEO. W. COLBURN LABORATORY, Inc.
164 N. Wacker Dr., Dept. A, Chicago 6, Ill.

Current Assignments of A.S.C. Members

Major film productions on which members of the American Society of Cinematographers were engaged as directors of photography during the past month.

Columbia

• CHARLES LAWTON, "Lawless," with Randolph Scott, Dorothy Malone, Jeff Corey, Forest Tucker and Frank Faylen. Gordon Douglas, director.

• RAY CORY, "Lawless," 2nd unit.

• IRA MORGAN, "The Adventures Of Sir Galahad," (Esskay) with George Reeves, Nelson Leigh, Pat Barton and Hugh Prosser. Spencer Bennet and Derwin Abrahams, directors.

• LESTER WHITE, "The Adventures of Sir Galahad," 2nd unit.

• VINCENT FARRAR, "Blondie's Hero," with Penny Singleton, Arthur Lake, Larry Simms, Marjorie Kent and Jerome Cowan. Edward Bernds, director.

• JOSEPH WALKER, "My Next Husband," retitled "Tell It To The Judge," with Rosalind Russell, Robert Cummings, Gig Young, Marie McDonald and Harry Davenport. Norman Foster, director.

• HENRY FREULICH, "Beyond These Walls," with Warner Baxter, Anna Lee and Harlan Warde. Seymour Friedman, director.

• BURNETT GUFFEY, "Baby Is Here," with Robert Young, Barbara Hale, Robert Hutton, and Janis Carter. Henry Levin, director.

• LESTER WHITE, "Good Humor Man," with Jack Carson, Lola Albright, and Jean Wallace. Lloyd Bacon, director.

M-G-M

• ROBERT SURTEES, "Intruder In The Dust," with Claude Jarman, Jr., David Brian, Juan Hernandez, and Charles Kemper. Clarence Brown, director.

• HAROLD ROSSON, "On The Town," (Technicolor) with Frank Sinatra, Gene Kelly, Vera Ellen, Ann Miller, and Betty Garret. Gene Kelly, director.

• PAUL VOGEL, "Battleground," with Van Johnson, John Hodiak, Ricardo Montalban, George Murphy, Marshall Thompson, Tommy Breen, Jim Mitchell, Bruce Cowling, and Denise D'Arcele. William Wellman, director.

• HARRY STRADLING, "Annie Get Your Gun," (Technicolor) with Judy Garland, Howard Keel, Keenan Wynn, Frank Morgan, Edward J. Arnold, J. Carroll Naish, and Clinton Sunberg. Busby Berkeley, director.

• RAY JUNE, "Death In The Doll House," with Ann Southern, Zachary Scott, Gigi Perreau, Nancy Davis, Kristine Miller, and Tom Hellman. Pat Jackson, director.

• JOE RUTTENBERG, "Side Street," (shooting in New York) with James Craig, Farley Grainger, Paul Kelly, and Cathy O'Donnell. Anthony Mann, director.

• CHARLES SCHOENBAUM, "Stars In My Crown," with Joel McCrea, Ellen Drew and Lewis Stone. Jacques Tourneur, director.

• ROBERT PLANCK, "Bodies and Souls," with Glenn Ford, Gloria deHaven, Charles Coburn, Janet Leigh and Nancy Davis. Curtis Bernhardt, director.

• HARRY STRADLING, "Tension," with Audrey Totter, Richard Basehart and Cyd Charisse. John Berry, director.

• HAROLD LIPSTEIN, "Ambush," with Robert Taylor, John Hodiak, and Don Taylor. Sam Wood, director.

• GEORGE FOLSEY, "Adam's Rib," with Spencer Tracy, Katherine Hepburn, Judy Holliday, and Tom Ewell. George Cukor, director.

Monogram

• HARRY NEUMANN, "Cattle King," with Johnny Mack Brown, Max Terhune and Felice Ingersol. Ray Taylor, director.

• WILLIAM SICKNER, "Trail Of The Yukon," with Kirby Grant, Susanna Dalbert, and Bill Edwards. William Beuadine, director.

Paramount

• GEORGE BARNES, "Riding High," with Bing Crosby, Coleen Gray, Charles Bickford, Frances Gifford, William Demarest, and Clarence Muse. Frank Capra, director.

• CHARLES LANG, "Copper Canyon," (Technicolor) with Ray Milland, Hedy LeMarr, Macdonald Carey, Mona Freeman, and Harry Carey, Jr. John Farrow, director.

• JOHN SEITZ, "Sunset Boulevard," with William Holden, Gloria Swanson, Erich von Stroheim, and Nancy Olson. Billy Wilder, director.

• JOHN ALTON, "Captain China," (Pine & Thomas) with John Payne, Gail Russell, Jeffrey Lynn, Edgar Bergen, Lon Chaney, Michael O'Shea, and John Qualen. Lewis R. Foster, director.

R. K. O.

• HARRY WILD, "The Big Steal," with Robert Mitchum, Jane Greer, William Bendix, Patric Knowles, Ramon Navarro, and John Qualen. Don Siegel, director.

• NICK MUSURACA, "I Married A Communist," with Robert Ryan, Laraine Day, John Agar, Thomas Gomez, and Janis Carter. Robert Stevenson, director.

• ROBERT deGRASSE, "The Bail Bond Story," with George Raft, Pat O'Brien, Jean Wallace, and Jim Backus. Ted Tetzlaff, director.

20th Century-Fox

• JOE MACDONALD, "Pinky," with Jeanne Crain, William Lundigan, Ethel Waters, and Basil Ruysdael. Elia Kazan, director.

• HARRY JACKSON, "Bandwagon," (Technicolor) with William Powell, Mark Stevens, Betsy Drake, and Jean Hersholt. Irving Reis, director.

• MILTON KRASNER, "Three Came Home," with Claudette Colbert, Alan Marshall, and Florence Desmond. Jean Negulesco, director.

• LEON SHAMROY, "Twelve O'Clock High," (Shooting in Florida) with Gregory Peck, Millard Mitchell, Hugh Marlowe, Paul Stewart, Gary Merrill, and Dean Jagger. Henry King, director.

• NORBERT BRODINE, "I Was A Male War Bride," with Cary Grant, Ann Sheridan, and William Neff. Howard Hawks, director.

• JACK CARDIFF, "The Black Rose," (Technicolor) (Shooting in North Africa) with Tyrone Power, Cecile Aubry, Alfonso Bedoya, and Bobby Blake.

• CHARLES G. CLARKE, "The Quartered City," (Shooting in Germany) George Seaton, director. No announcement on cast as yet.

United Artists

• JOSEPH BIROC, "Mrs. Mike," (Sam Bischoff Prod.) with Dick Powell, Evelyn Keyes and J. M. Kerrigan. Louis King, director.

• RUSSELL HARLAN, "Gun Crazy," with Peggy Cummins, John Dahl, and Annabelle Shaw. Joseph H. Lewis, director.

Universal-International

• WILLIAM DANIELS, "Abandoned," with Dennis O'Keefe, Gale Storm, Marjorie Rambeau, and Meg Randall. Joe Newman, director.

• IRVING GLASSBERG, "Francis," with Donald O'Connor, Zasu Pitts, Richard Long, Ray Collins, and Patricia Medina. Arthur Lubin, director.

Warner Brothers

• WILFRED CLINE, "Always Sweethearts," (Technicolor) with Shirley Temple, Barry Fitzgerald, Lon McCallister, and Alan Hale. David Butler, director.

• CARL GUTHRIE, "Barricade," with Dan Clark, Raymond Massey and Robert Douglas. Peter Godfrey, director.

• PEVERELL MARLEY, "Return of the Frontiersman," (Technicolor) with Gordon MacRae, Rory Calhoun, Julie London, and Fred Clark. Richard Bare, director.

• SID HICKOX, "White Heat," with James Cagney, Virginia Mayo, Edmond O'Brien, and Ray Montgomery. Raoul Walsh, director.

• ERNEST HALLER, "Chain Lightning," with Humphrey Bogart, Elinor Parker, Raymond Massey, and Richard Whorf. Stuart Heisler, director.

• ROBERT BURKS, "Beyond The Forest," with Bette Davis, Joseph Cotten, David Brian, and Ruth Roman. King Vidor, director.

BULLETIN BOARD

(Continued from Page 194)

on a three-year contract, at expiration of his present contract with M-G-M.

•

A.S.C. PRESIDENT Charles Clarke is working on plan for the Society to grant an annual award for best photography by an A.S.C. member. Plan calls for screening best film voted each month by A.S.C.

JOSEPH VALENTINE

Joseph Valentine, a member of the A.S.C. since 1927, died in his sleep, May 19th. Winning an Acadmey Award this year for his photography on "Joan of Arc," Valentine had previously been nominated for awards on four other occasions. His initial first-camera job was photographing Shirley Mason in "My Husband's Wives" at the old Wm. Fox Studios in 1924. His most recent work was on "Love Is Big Business" at RKO. Surviving are his widow, Katherine; a two-year old son, Joseph; his parents, Mr. and Mrs. Frank Valentine, and a sister, Mrs. Lucy Gaudioso.

members, with a certificate of recognition probably going to the cinematographer. The year's twelve best films will then be evaluated in December for the annual award.

•

WARNER BROTHERS' electrical department has developed a radically new lighting feature that involves Selsyn motor controlled shutters for arc lamps. Innovation of the shutters permits unlimited freedom in the dimming of arc lights—a feat hitherto impossible.

The setup consists of small, venetian type shutters hinged in an aluminum frame and keyed to a Selsyn motor. The frame is hung in front of the arc and wired to a central control console. Operation of the motor controls light intensity from full up to off. More than 100 shutters can be set up at once and broken down into light moves running from slow fades to complete blackouts. Shutters can be utilized independently or in groups and a total of eight light cues can be worked in a single setup.

Use of the shutters proved invaluable on the "Fighter Squadron" set when the script called for a complete blackout of 35 arcs in a bombing sequence in the Technicolor saga of the Army Air Forces. Cutting the switches on such a great number of arcs would have caused the studio generators to run wild with an underload, so Selsyn shutters were utilized with completely satisfactory results.

•

FIRST COMPREHENSIVE report on developments in production and processing of motion pictures as television program material, and a means of recording television programs has been compiled and published by the Society of Motion Picture Engineers. Report, in booklet form and selling for 75c a copy, was compiled by a group of 32 specialists within the Society's Television Committee.

•

GASPARCOLOR reportedly will enter the market soon with a complete new 35mm. color film.

•

EASTMAN KODAK Company has opened a new research laboratory in Panama City, Panama. Designed for the study of photographic materials under tropical conditions, its facilities include a modern two-story building in the Juan Franco area of Panama City and a jungle test station on Barro Colorado Island in Gatun Lake, part of the Panama Canal. The new building has offices, a photographic studio, a library on photography, and air-conditioned storage rooms on the ground floor. On the second floor are darkrooms, and rooms for research in chemistry, biology, physics and sensitometry. A darkroom has been built on the roof where it will be exposed to full tropical conditions. Main activity of laboratory will consist of a study of the vast range of problems that face photographers in the tropics.

•

TELENEWS NEWSREEL originating in New York, is now turning out eight different newsreels each week: two for theatres, one double reel weekly for television and a five times a week daily reel, also for television.

THE FOUNTAINHEAD

(Continued from Page 221)

necessary to keep the perspective constantly changing from floor to floor as she rose.

The settings for "The Fountainhead", besides being visually striking and perfectly matched to the theme of the story, are notable for yet another reason completely unrelated to art: they were economical to construct.

Back in the all-too-recent days when a film's worth was judged (at least by those in the industry) according to the amount of money spent on it, the consensus of opinion was that settings could not possibly be good unless they were expensive. Now that production economy has become the smart thing on the sound stages, the less expensively a good effect can be achieved, the more it is praised.

The settings for "The Fountainhead" thus come in for a heavy share of praise, because their simpliciay of design and detail made them economical to construct and decorate. Paradoxically, this simplicity is so rich in its clean forceful sweep, that an impression of expensive production value permeates the entire film.

An example of this forceful economy can be drawn from examining the sets for the architect's apartment and for the publisher's office. In each of these sets, huge windows take up one whole wall of the huge room. Outside, skillfully executed photo-murals form the cycloramic skylines. The remaining walls are absolutely plain, with only a few functional pieces of modern furniture for set dressing.

"The Fountainhead," artistically speaking, achieves its visual elegance by understatement."

Add SOUND TO YOUR SILENT FILMS

(Music • Narration • Special Effects)

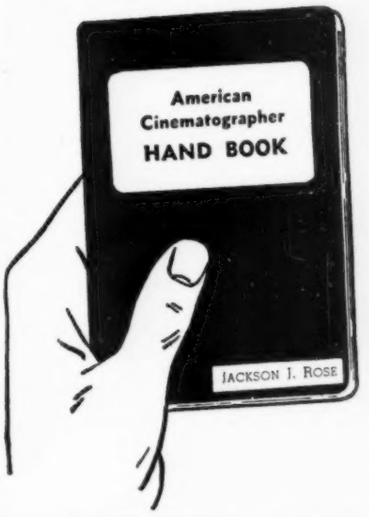
LET us convert your 16 mm picture to a sound film of the highest quality. Skilled technical staff, and finest sound recording equipment and studio facilities to serve industrial, amateur and educational film producers. Write TELEFILM, Inc., Dept. A-14 6039 Hollywood Blvd., Hollywood 28, Calif. for prices and literature.

OUR SERVICE IS USED BY:

• AiResearch Mfg. Co. • Lockheed Aircraft Corp.
• Douglas Aircraft Co. • Food Machinery Corp.
• U. S. Naval Photo Services Dept. • Santa Fe Railroad
• Standard Oil Co. of Calif.

TELEFILM HOLLYWOOD

For Every Movie Maker, Amateur Or Professional



Source of QUICK ANSWERS to such questions as: "What is the angle of view of my 25mm. lens?" "What's the depth of focus of my 50mm. lens at 12 feet?" "How much film will a 30 second take consume at 24 f.p.s.?" "What's the Weston daylight rating of Ansco Ultra-Pan negative?" "What stop shall I use to shoot at 8 f.p.s. if exposure at 16 f.p.s. is f/4.5?" And thousands more! A handbook that's a must for every motion picture cameraman, professional or amateur.

ORDER YOUR COPY TODAY!

$5.00
prepaid

Book Department,
American Cinematographer,
1782 No. Orange Dr.,
Hollywood 28, Calif.

Gentlemen: Enclosed please find $5.00 for which please send me a copy of THE AMERICAN CINEMATOGRAPHER HANDBOOK AND REFERENCE GUIDE.

Name.....

Address.....

City.....Zone.....State.....

(If you live in California, please include 15c sales tax — total $5.15.)

Classified Advertising

RATES: **Ten cents per word—minimum ad $1.00. Ads set in all capital letters, 60c per agate line (12 agate lines per inch). No discounts on classified advertising. Send copy to editorial office, 1782 N. Orange Dr., Hollywood 28, California.**

FOR SALE

BASS SAYS:

For Camera Values hard to beat . . .
Write Bass, 179 W. Madison Street!

35mm. Eyemo Compact 3 lens Turret, 71L, 1" Cooke F:2.5, 4" Cooke deep field Speed Panchro F:2.5 coated, 6" Cooke F:4.5, carrying case $875.00

35mm. DeVry Automatic, F:3.5, Case..... $ 87.50

35mm. Akeley, complete with Akeley Gyro tripod, 5 mags., matched pair of F:3.5 lenses and 6" Telephoto..... $425.00

WRITE BASS FIRST

BASS CAMERA CO., 179 W. MADISON ST., CHICAGO 2, ILL.

35MM. INTERMITTENTS—now only $75.00 each—precision machining, excellent design. Perfect for Printers, Animation Cameras, Slide Film Cameras, and for silencing and modernizing motion picture cameras. Double pull-down claws and double registration pins, at aperture. Entire unit in light-tight metal case to accommodate 200-foot roll, complete with take-up. Light trap at aperture. Original cost $1,000.00.

A F P
1600 BROADWAY - - SUITE 1004
New York 19, N. Y.

35MM. CINEPHON NEWSREEL CAMERA — Featuring built-in automatic dissolving shutter, 6 v. motor, 3—200 foot magazines, 3 lens revolving turret, rotating drum, side viewfinder, focusing through film, including 3 Meyer Primoplan lenses—in excellent condition — fine precision movement — only $750.00. FLORMAN & BABB, 1254 Sherman Avenue, Bronx 56, New York.

AURICON-PRO SINGLE SYSTEM sound-on-film camera; dual lateral track; noise reduction amplifier; case; extra magazine. Norwood Director meter. All like new—not a scratch. CINE SPECIAL, 1" F.1:9; 15mm. F.2:7; 2½" F.2:7. Extra 100 ft. magazine; Weston meter; case, masks and synchronous motor drive. KODAK REFLEX, 4x5 B&J press with F.4:7 Raptar in Rapax shutter. Ten holders, adapter and Gadget Bag—5x7 Model E. Eastman auto-focus enlarger. Best offer on all or part. Will personally deliver sound camera up to 500 miles and give purchaser two days instructions in maintenance and operation of same. Write or Wire — OPIE EVANS, 164 East Lods Street, Akron, Ohio.

ARRIFLEX, 35mm camera with 3 lenses, excellent condition; 32mm, 1.9, 2", 1.5 Astros, $450.00. Jack Lieb, Care of Kling Studios, 601 N. Fairbanks Ct., Chicago 11, Illinois.

WE BUY, SELL AND RENT PROFESSIONAL AND 16mm. EQUIPMENT, NEW AND USED. WE ARE DISTRIBUTORS FOR ALL LEADING MANUFACTURERS. RUBY CAMERA EXCHANGE, 729 Seventh Ave., New York City. Established since 1910.

WE Buy, Sell, Trade Cameras, Projectors, Laboratory and Cutting Room Equipment, 8-16-35-mm. We pay highest prices. Carry one of the most diversified stocks in America. Mogull's Camera & Film Exchange, 112-114 W. 48th St., New York 19, N. Y.

IMMEDIATE DELIVERY on Polaroid Land Camera also Stereo Realist. CAMERA MART, INC., 1614 No. Cahuenga, Hollywood 28, HEmpstead 7373.

CHAIRS FOR THEATRES, Cafes, Restaurants. New. $10.00 each. Bovilsky, 1061 Lara Street, Los Angeles, Calif.

FOR SALE

35MM. MODEL U-D-S SOUND MOVIOLA. In good optical and mechanical condition. Price $797.00.

M.G.M CAMERA ROLAMBULATOR DOLLY, Precision, Ball Bearing, Pan Tilt Controls, Weight 700 lbs. Cost $6,000.00. Barain $1,500.00

H-C-E 16MM. SPECIAL EFFECTS OPTICAL PRINTER, Features: Bell & Howell Projector, Model A Eastman Camera, 42" Lathe Bed, 500-Ohm Dimmer, Foot Switch, Motor, Microscope, Cost $5,000.00. A Gift at $1,500.00.

35MM. BELL & HOWELL SINGLE SYSTEM SOUND CAMERA. Four Quality Speed Lenses, Two 1000-ft. Magazines, Freehead, Tripod, Ready-to-operate, Price $3,750.00.

LIKE-NEW 16MM. AURICON SOUND CAMERA, SINGLE AND DOUBLE SYSTEM RECORDINGS. Outfit complete, New Guarantee, Price $2,313.60.

ANIMATION STAND, SUITABLE FOR EITHER 35MM. OR 16MM. Heavy Steel Construction, Precision Machine, Weight 1500 pounds. Price $2,350.00.

35MM. EYEMOS, ARRIFLEX AND OTHER TYPES OF CAMERAS, MOTION PICTURES LENSES, MOUNTED AND UNMOUNTED, AT REDUCED PRICES.

HOLLYWOOD CAMERA EXCHANGE
1600 Cahuenga Blvd. Hollywood

---

3 STAINLESS STEEL 16mm. tanks; 1 wash tank; 4 cypress racks, 120 ft, good buy; 8mm. films, 16mm, closing out—lists, dime. 24 volt model E Eastman Kodak camera, 100 ft. capacity, f/3.5 Wollensak lens, $60.00, like new; photo for $1.00, refund purchase of camera. Two Natco sound projectors, equal to new, $225.00 each. Hollywood Jr. sound picture printer. $100.-00. Two 6" RCA speakers, use any sound projector built in cabinets, $10.00. Complete library sound films of B. W. Life Songs Stephen Foster, twelve 2-reel subjects, $50.00 a set, literature free. Buy—Sell—Exchange—Swap. Will buy all type of flood lights. What have you? SAM'S ELECTRIC SHOP, Passaic, New Jersey.

CINE SPECIAL—f/1.9 lens, complete with Yolo automatic dissolve, $475.00. JOSEPH YOLO, Box 369, Yakima, Washington.

PHOTOGRAPHERS

SERVICE TO PRODUCERS

Mitchell 16mm. Professional camera equipped with 1200 foot film magazines for continuous filming, available for rent with operator to 16mm. producers. Write for rates.

Walter Porep
Sportsreel Productions
1114 Carleton St.
Berkeley, California

You'd Be Surprised How Much Equipment This Page Sells Each Month. Ask Any Advertiser.

—American Cinematographer

STUDIO & PRODN. EQUIP.

HUNDREDS OF BRAND NEW ITEMS featured in catalog Sturelab — Sent free to Film Producers, Lab Technicians, Recording Engineers and Cine-Men. Everything for studio, laboratory and cutting room. New Nord 16mm Professional Camera $1935.00; New 16mm Sound Printers, $685.00; New 17.5mm Tape Recorders, $1500.00; Composite Sound Moviola $495.00; Arriflex Newsreel Camera, 4 lenses, complete, $795.00; MR 2000W Spots on stands, $99.50; combination Reversal Processing Machine, $2,375.00; Eyemo Q Turret Camera, $695.00; Stop Watch Film Timer, $24.75; Neumade combination 16/35mm Automatic Film Cleaner, $350.00 value, $194.50; Giant Spotlite Tripods 8' high, $9.95; Bardwell 5000W Floodlites, $111.75. Dept. f — **S. O. S. CINEMA SUPPLY CORPORATION, 602 W. 52nd Street, New York 19.**

ROGER CAMERA TIMER

for automatic operation of (any) camera and light for **TIME-LAPSE CINEMATOGRAPHY** and **ANIMATION** as used by many organizations since 15 years .Microcinema Equipment.

SETTINGS: 1, 2, 3, 6, 12 and 24 Exp. per Hour 1, 2, 3, 4, 6, and 8 Exp. per minute and faster, also single frame push button.

ROLAB
Sandy Hook, Connecticut

EQUIP. WANTED

WANTED TO BUY FOR CASH

CAMERAS AND ACCESSORIES
MITCHELL, B & H, EYEMO, DEBRIE, AKELEY
ALSO LABORATORY AND CUTTING ROOM EQUIPMENT

CAMERA EQUIPMENT COMPANY
1600 BROADWAY, NEW YORK CITY 19
CABLE: CINEQUIP

COMPLETE 16MM. and 35MM. movie production equipment—Especially want 35mm. Eyemos and Arriflex cameras — 16mm. Maurer and Cine Special Cameras — Lenses, accessories, Moviolas, high price paid—Immediate Cash. Write fully, or send equipment for our offer. FLORMAN & BABB, 1254 Sherman Avenue, Bronx 56, New York.

"WANTED"
Mitchell - Akeley - B & H
Wall - Eyemo
Cameras - Lenses - Equipment
NATIONAL CINE EQUIPMENT, INC.
20 West 22nd Street
New York 10, New York

WE PAY CASH FOR EVERYTHING PHOTOGRAPHIC. Write us today. Hollywood Camera Exchange, 1600 Cahuenga Blvd., Hollywood.

MOTION PICTURES WANTED

16MM. KODACHROME FOR SCHOOL MARKET. NATIONAL ORGANIZATION INTERESTED COMPLETED FILMS OR UNCUT FOOTAGE WITH EDUCATIONAL VALUE. ONLY PROFESSIONAL QUALITY MATERIAL CONSIDERED. GIVE FULL DETAILS FIRST LETTER. BOX 1058, THE AMERICAN CINEMATOGRAPHER.

MISCELLANEOUS

A.S.C. "CINEMATOGRAPHIC ANNUAL," published 1930. Limited number copies availabble at $3.50. A collectors' item. A.S.C. Agency, 1782 N. Orange Dr., Hollywood 28, Calif.

When "the dawn comes up like thunder"...

HE'S at his console—the re-recording mixer—weaving skeins of sound into the picture's pattern . . . skillfully matching sound to sight, mood for mood.

Under his sensitive control, dialogue and music and special effects are expertly proportioned, delicately balanced to round out the realism and drama of the scene.

To fulfill this essential contribution to the picture, the re-recording mixer requires creative understanding of the director's desires . . . a sense of the dramatic . . . a feeling for mood . . . and the high order of faithful sound reproduction and re-recording he gets from the large and versatile family of Eastman motion picture films.

EASTMAN KODAK COMPANY
ROCHESTER 4, N. Y.

J. E. BRULATOUR, INC., DISTRIBUTORS
FORT LEE • CHICAGO • HOLLYWOOD

MORE PROOF OF BELL & HOWELL DEPENDABILITY!

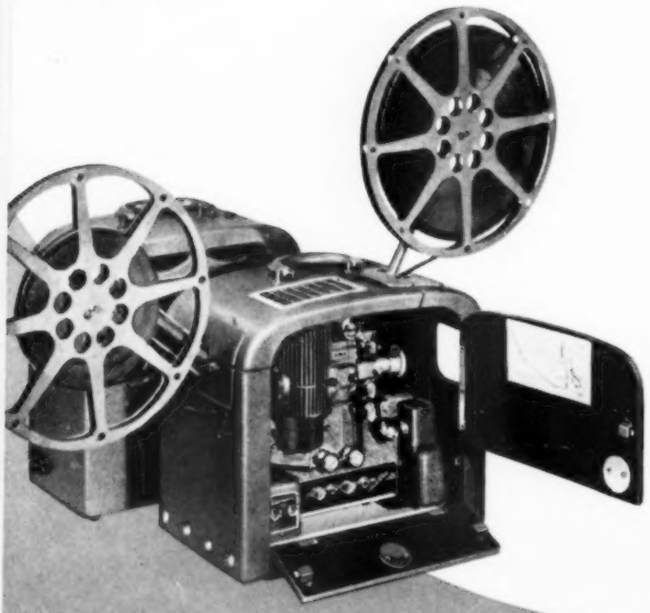
FILMOSOUND Runs 1300 Hours Perfectly in Endurance Test

A B&H Filmosound Projector, taken at random from stock and projecting film under normal conditions, is in continuous operation on our laboratory test stand. As this page goes to press, it has run 1300 hours, with no time lost for repairs!

Think what this means to you in terms of sound-film projector performance *you can depend on*—and in really low cost-per-hour operation!

Such dependability has long been one of the major reasons for Filmosound superiority. Now this new test supplies additional proof that a Bell & Howell Projector assures you maximum available projection time, no disappointed audiences, no wasted film bookings, minimum repair cost, the greatest protection for valuable films.

You cannot *afford* to select any other than a Filmosound Projector. For full details on all Filmosound models, write Bell & Howell Company, 7148 McCormick Road, Chicago 45.



NEW SINGLE-CASE FILMOSOUND

Higher undistorted sound output than any other lightweight projector! Built-in 6" speaker can be removed from case and placed near screen. Larger speakers available. Handles both sound and silent films. An outstanding value (with 6" speaker) at only..... **$449**

NEW ACADEMY FILMOSOUND

Specially designed for sizable audiences . . . sound or silent films. Separate 8", 12", or power speaker, as required. With 8" speaker this Filmosound provides double the sound output of any other lightweight projector. Now (with 8" speaker) only **$495**

GUARANTEED FOR LIFE
During life of product, any defects in workmanship or material will be remedied free (except transportation).

Precision-Made by

Bell & Howell

Since 1907 the Largest Manufacturer of Professional Motion Picture Equipment for Hollywood and the World